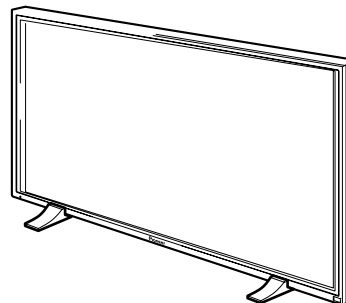


Service Manual



PDP-503CMX

ORDER NO.
ARP3150

PLASMA DISPLAY

PDP-503CMX

PDP-503MXE

THIS MANUAL IS APPLICABLE TO THE FOLLOWING MODEL(S) AND TYPE(S).

Model	Type	Power Requirement	Remarks
PDP-503CMX	LUCB	AC100 - 120V	
PDP-503MXE	YVLDK	AC100 - 240V	

The main parts having their serial numbers described in the table below are applicable to this service manual. For details on replacing with the following parts, refer to Service Information for each part.

Model Name	Part numbers and serial numbers of the main parts applicable to this service manual					
	SW POWER SUPPLY MODULE (AXY1059)	REAR CASE (ANE1610)	RGB ASSY (AWZ6744)	DIGITAL VIDEO ASSY (AWV1979)	X DRIVE ASSY (AWV1984)	Y DRIVE ASSY (AWZ6745)
PDP-503CMX/ LUCB	0008541 -	0010261 -	0010891 -	0013473 -	0013671 -	0013671 -
PDP-503MXE/ YVLDK	0005421 -	0005991 -	0000641 -	0007451 -	0007611 -	0007611 -



For details, refer to "Important symbols for good services" .

SAFETY INFORMATION



This service manual is intended for qualified service technicians ; it is not meant for the casual do-it-yourselfer. Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual. Improperly performed repairs can adversely affect the safety and reliability of the product and may void the warranty. If you are not qualified to perform the repair of this product properly and safely, you should not risk trying to do so and refer the repair to a qualified service technician.

WARNING

This product contains lead in solder and certain electrical parts contain chemicals which are known to the state of California to cause cancer, birth defects or other reproductive harm.

Health & Safety Code Section 25249.6 - Proposition 65

NOTICE

(FOR CANADIAN MODEL ONLY)

Fuse symbols (fast operating fuse) and/or (slow operating fuse) on PCB indicate that replacement parts must be of identical designation.

REMARQUE

(POUR MODÈLE CANADIEN SEULEMENT)

Les symboles de fusible (fusible de type rapide) et/ou (fusible de type lent) sur CCI indiquent que les pièces de remplacement doivent avoir la même désignation.

SAFETY PRECAUTIONS

NOTICE : Comply with all cautions and safety related notes located on or inside the cabinet and on the chassis.

The following precautions should be observed :

- When service is required, even though the PDP UNIT an isolation transformer should be inserted between the power line and the set in safety before any service is performed.
- When replacing a chassis in the set, all the protective devices must be put back in place, such as barriers, nonmetallic knobs, adjustment and compartment covershields, isolation resistor-capacitor, etc.
- When service is required, observe the original lead dress. Extra precaution should be taken to assure correct lead dress in the high voltage circuitry area.
- Always use the manufacture's replacement components. Especially critical components as indicated on the circuit diagram should not be replaced by other manufacture's. Furthermore where a short circuit has occurred, replace those components that indicate evidence of overheating.
- Before returning a serviced set to the customer, the service technician must thoroughly test the unit to be certain that it is completely safe to operate without danger of electrical shock, and be sure that no protective device built into the set by the manufacture has become defective, or inadvertently defeated during servicing. Therefore, the following checks should be performed for the continued protection of the customer and servicetechnician.
- Perform the following precautions against unwanted radiation and rise in internal temperature.
 - Always return the internal wiring to the original styling.
 - Attach parts (Gasket, Ferrite Core, Ground, Rear Cover, Shield Case etc.) surely after disassembly.
- Perform the following precautions for the PDP panel.
 - When the front case is removed, make sure nothing hits the panel face, panel corner, and panel edge (so that the glass does not break).
 - Make sure that the panel vent does not break. (Check that the cover is attached.)
 - Handle the FPC connected to the panel carefully. Twisting or pulling the FPC when connecting it to the connector will cause it to peel off from the panel.
- Pay attention to the following.
 - When the front case is removed, infrared ray is radiated and may disturb reception of the remote control unit.
 - Pay extreme caution when the front case and rear panel are removed because this may cause a high risk of disturbance to TVs and radios in the surrounding.

Leakage Current Cold Check

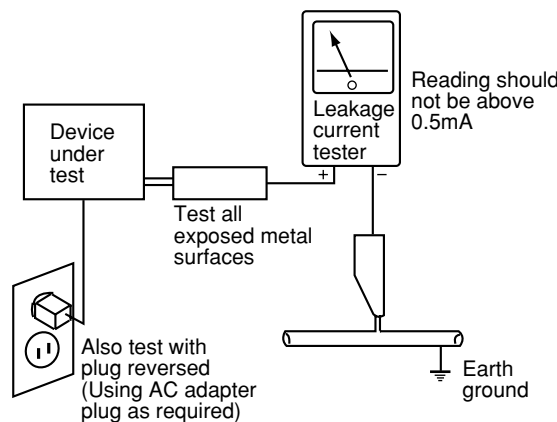
With the AC plug removed from an AC power source, place a jumper across the two plug prongs. Turn the AC power switch on. Using an insulation tester (DC 500V), connect one lead to the jumpered AC plug and touch the other lead to each exposed metal part (input/output terminals, screwheads, metal overlays, control shafts, etc.), particularly any exposed metal part having a return path to the chassis. Exposed metal parts having a return path to the chassis should have a minimum resistor reading of $0.3M\Omega$ and a maximum resistor reading of $5M\Omega$. Any resistor value below or above this range indicates an abnormality which requires corrective action. Exposed metal parts not having a return path to the chassis will indicate an open circuit.

Leakage Current Hot Check

Plug the AC line cord directly into an AC power source (do not use an isolation transformer for this check).

Turn the AC power switch on.

Using a "Leakage Current Tester (Simpson Model 229 equivalent)", measure for current from all exposed metal parts of the cabinet (input/output terminals, screwheads, metal overlays, control shaft, etc.), particularly any exposed metal part having a return path to the chassis, to a known earth ground (water pipe, conduit, etc.). Any current measured must not exceed 0.5mA.



AC Leakage Test

ANY MEASUREMENTS NOT WITHIN THE LIMITS OUTLINED ABOVE ARE INDICATIVE OF A POTENTIAL SHOCK HAZARD AND MUST BE CORRECTED BEFORE RETURNING THE SET TO THE CUSTOMER.

PRODUCT SAFETY NOTICE

Many electrical and mechanical parts in PIONEER set have special safety related characteristics. These are often not evident from visual inspection nor the protection afforded by them necessarily can be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in this Service Manual.

Electrical components having such features are identified by marking with a Δ on the schematics and on the parts list in this Service Manual.

The use of a substitute replacement component which does not have the same safety characteristics as the PIONEER recommended replacement one, shown in the parts list in this Service Manual, may create shock, fire or other hazards.

Product Safety is continuously under review and new instructions are issued from time to time. For the latest information, always consult the current PIONEER Service Manual. A subscription to, or additional copies of, PIONEER Service Manual may be obtained at a nominal charge from PIONEER.

■Charged Section

The places where the commercial AC power is used without passing through the power supply transformer.

If the places are touched, there is a risk of electric shock. In addition, the measuring equipment can be damaged if it is connected to the GND of the charged section and the GND of the non-charged section while connecting the set directly to the commercial AC power supply. Therefore, be sure to connect the set via an insulated transformer and supply the current.

1. AC Power Cord
2. AC Inlet with Filter
3. Power Switch (S1)
4. Fuse (In the SW POWER SUPPLY Module)
5. STB Transformer and Converter Transformer (In the SW POWER SUPPLY Module)
6. Other primary side of the SW POWER SUPPLY Module

■High Voltage Generating Point

The places where voltage is 100V or more except for the charged places described above. If the places are touched, there is a risk of electric shock.

1. SW POWER SUPPLY Module (225V)
2. X DRIVE Assy (–300V to 225V)
3. Y DRIVE Assy (355V)
4. SCAN (A) Assy (355V)
5. SCAN (B) Assy (355V)
6. X CONNECTOR (A) Assy (–300V to 225V)
7. X CONNECTOR (B) Assy (–300V to 225V)

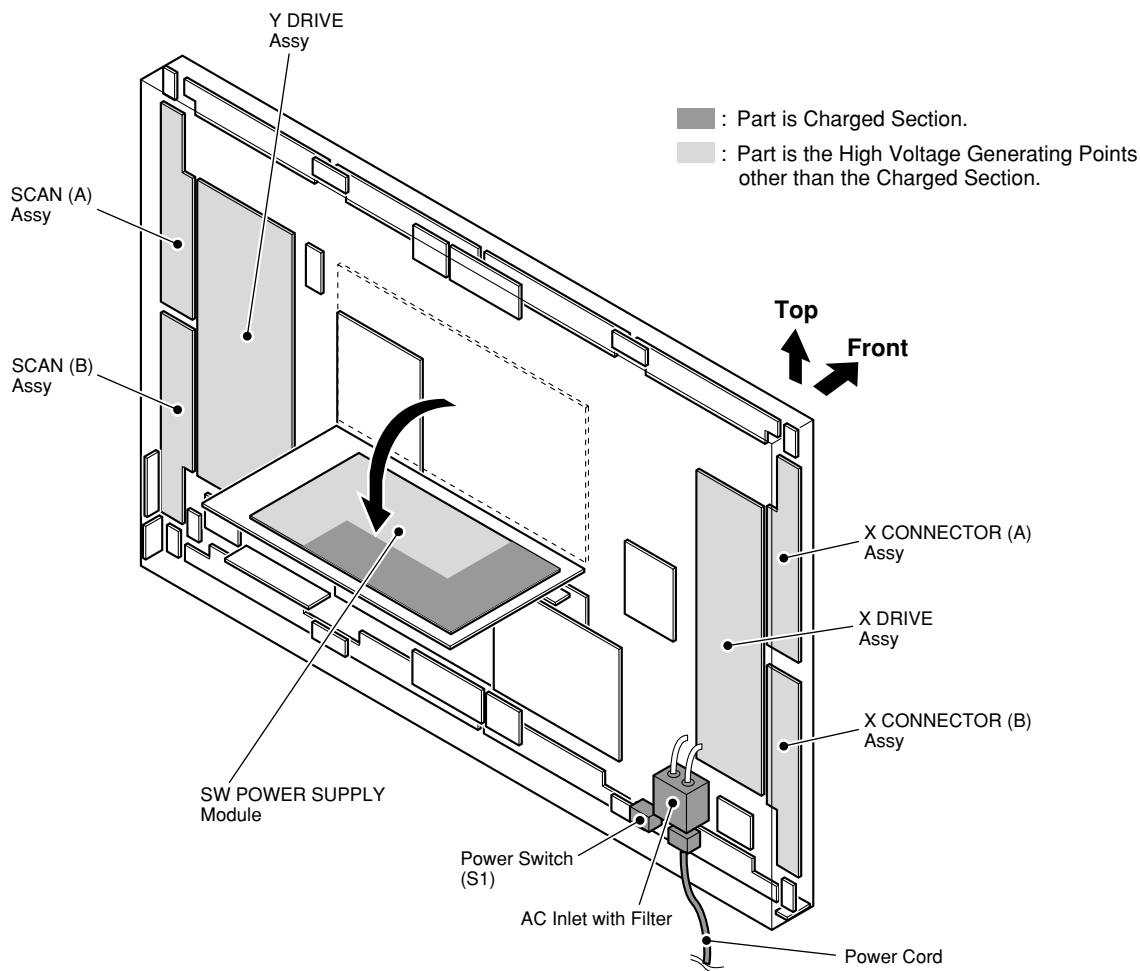


Fig.1 Charged Section and High Voltage Generating Point (Rear View)

[Important symbols for good services]

In this manual, the symbols shown-below indicate that adjustments, settings or cleaning should be made securely. When you find the procedures bearing any of the symbols, be sure to fulfill them:

1. Product safety



You should conform to the regulations governing the product (safety, radio and noise, and other regulations), and should keep the safety during servicing by following the safety instructions described in this manual.

2. Adjustments



To keep the original performances of the product, optimum adjustments or specification confirmation is indispensable. In accordance with the procedures or instructions described in this manual, adjustments should be performed.

3. Cleaning



For optical pickups, tape-deck heads, lenses and mirrors used in projection monitors, and other parts requiring cleaning, proper cleaning should be performed to restore their performances.

4. Shipping mode and shipping screws



To protect the product from damages or failures that may be caused during transit, the shipping mode should be set or the shipping screws should be installed before shipping out in accordance with this manual, if necessary.

5. Lubricants, glues, and replacement parts



Appropriately applying grease or glue can maintain the product performances. But improper lubrication or applying glue may lead to failures or troubles in the product. By following the instructions in this manual, be sure to apply the prescribed grease or glue to proper portions by the appropriate amount. For replacement parts or tools, the prescribed ones should be used.

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1. SPECIFICATIONS

PLASMA DISPLAY (PDP-503CMX, PDP-503MXE)

General

Light emission panel 50 inch plasma display panel
Number of pixels 1280 x 768
Power supply AC 100 - 120 V, 50/60 Hz (PDP-503CMX)
Power supply AC 100 - 240 V, 50/60 Hz (PDP-503MXE)
Rated current 3.8 A - 3.1A (PDP-503CMX)
Rated current 3.8 A - 1.6A (PDP-503MXE)
Standby power consumption 1 W
External dimension 1218 (W) x 714 (H) x 98 (D) mm
47-31/32 (W) x 28-1/8 (H) x 3-7/8 (D) in.
(including display stand)
..... 1218 (W) x 737 (H) x 300 (D) mm
47-31/32 (W) x 29-1/32 (H) x 11-13/16 (D) in.
Weight 38.9 kg (85 lbs. 12 oz)
(including display stand) 39.5 kg (87 lbs. 1 oz)

Input/output

Video

INPUT 1

Input

Mini D-sub 15 pin (socket connector)
RGB signal (G ON SYNC compatible)
RGB ... 0.7 Vp-p/75 Ω/no sync.
HD/CS, VD ... TTL level
/positive and negative polarity
/2.2 kΩ
G ON SYNC
... 1 Vp-p/75 Ω/negative sync.
*Compatible with Microsoft's Plug & Play
(VESA DDC1/2B)

Output

Mini D-sub 15 pin (socket connector)
75 Ω/with buffer

INPUT 2

Input

BNC jack (x5)
RGB signal (G ON SYNC compatible)
RGB ... 0.7 Vp-p/75 Ω/no sync.
HD/CS, VD ... TTL level
/positive and negative polarity/
75 Ω or 2.2 kΩ
(impedance switch)
G ON SYNC ...
1 Vp-p/75 Ω/negative sync.

Audio

Input

AUDIO INPUT (for INPUT 1/2)
Stereo mini jack
L/R ... 500mVrms/more than 10 kΩ

Output

AUDIO OUTPUT
Stereo mini jack
L/R ... 500mVrms (max)/less than 5 kΩ

SPEAKER

L/R ... 8 – 16 Ω/2W +2W (at 8 Ω)

Control

RS-232C D-sub 9 pin (pin connector)
COMBINATION IN/OUT Mini DIN 6 pin (x2)
CONTROL IN/OUT monaural mini jack (x2)

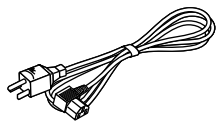
Accessories

Power cord 1 (PDP-503CMX Only)
Remote control unit 1
Remote control unit holder 1
AA (R6) batteries 2
Cleaning cloth 1
Speed clamps 2
Bead bands 2
Warranty 1 (PDP-503CMX Only)
Operating Instructions 1
Display stands 2
Washers 2
Hex hole bolts (M8X40) 2
CD-ROM (information files) 1
Ferrite core (PDP-503MXE Only)
Cable tie (PDP-503MXE Only)

Due to improvements, specifications and design are subject to change without notice.

● Accessories

- Power Cord (ADG1208)

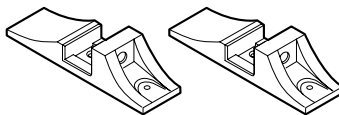


- Cleaning Cloth (for wiping front panel) (AED1208)

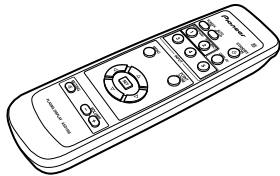


PDP-503CMX
Only

- Display Stand (×2) (AMR3264)

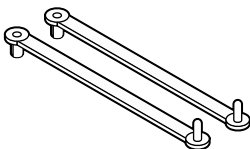


- Remote Control Unit (AXD1459)



- Binder Assy (AEC1758)

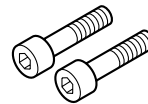
- Speed Clamp (×2)



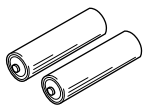
- Washer (×2) (WB80FZB)



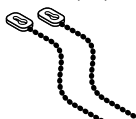
- Hex Hole Bolts (×2) (SMZ80H400FZB)



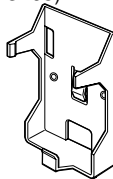
- Dry Cell Battery (R6P, AA)



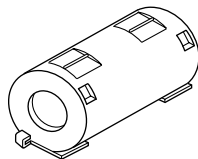
- Bead Bands (×2)



- Remote Control Unit Holder (AMR3268)



- Ferrite Core (ATX1031)



- Cable Tie



PDP-503MXE
Only

■ 5 ■ 6 ■ 7 ■ 8 ■

A

B

C

D

E

F

■ 5 ■ 6 ■ 7 ■ 8 ■ 9 ■

PDP-503CMX

PACKING parts Lis

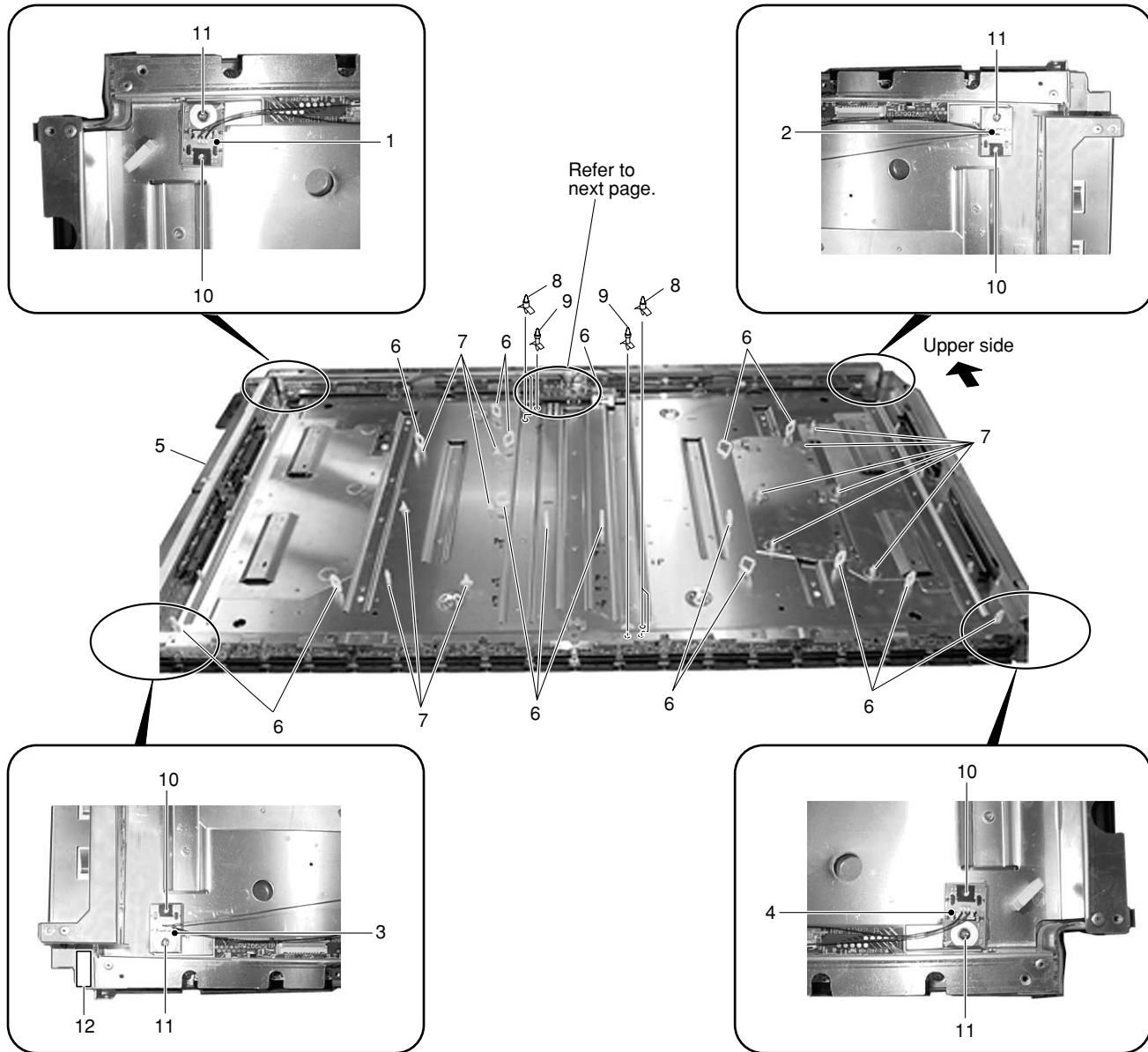
Mark No.	Description	Part No.	Mark No.	Description	Part No.
1	Upper Carton	See Contrast table (2)	23	Binder Assy (Speed Clamp x 2, Bead Band x 2)	AEC1758
2	Under Carton	AHD3037	24	Cleaning Cloth (for Wiping Front Panel)	AED1208
3	Pad	AHA2280	NSP 25	Warranty Card	See Contrast table (2)
4	Mirror Mat	AHG1284			
5	Caution Sheet	ARM1201			
NSP 6	Warranty Card	See Contrast table (2)	NSP 26	Vinyl Pouch	See Contrast table (2)
7	•••••		27	Washer	WB80FZB
8	Front Sheet	AHB1241	28	Hex Hole Bolt	SMZ80H400FZB
9	Cord Case	AHC1037	29	Vinyl Bag	AHG-1330
10	Power Cord	See Contrast table (2)	30	Caution Sheet	AEM1203
11	Vinyl Bag	See Contrast table (2)	31	Remote Control Unit	AXD1459
12	Accessory Case	AHC1040	32	Battery Cover	AZN2462
13	Screw Set	AXX1060	NSP 33	Dry Cell Battery (R6P, AA)	VEM1031
14	SP Spacer	AEC1925	34	Display Stand	AMR3264
15	Operating Instructions (Spanish/ Italian/ Dutch)	See Contrast table (2)	35	Remote Control Unit Holder	AMR3268
16	•••••		36	Ferrite Core	See Contrast table (2)
17	OPERating Instructions (Japanese/ English/ French)	See Contrast table (2)	37	SP Caution Sheet	ARM1219
18	Caution Sheet	ARM1200	38	Image Caution Sheet	ARM1220
19	Caution Sheet	ARM1221	39	Label (BLUE)	AAX2787
20	Plasma Caution Sheet	See Contrast table (2)	40	Label (SILVER)	AAX2817
21	Plasma Caution Sheet	See Contrast table (2)	41	Label (GREEN)	AAX2956
22	Caution Sheet	See Contrast table (2)	42	Label (GUARANTY)	See Contrast table (2)
			43	Plasma Caution Sheet	ARM1149
			44	Accessory Assy	See Contrast table (2)

(2) CONTRAST TABLE

PDP-503CMX/LUCB and PDP-503MXE/YVLDK are constructed the same except for the following :

Mark	No.	Symbol and Description	PDP-503CMX/ LUCB	PDP-503MXE/ YVLDK
NSP ⚠	1	Upper Carton	AHD3094	AHD3097
	6	Warranty Card	ARY1093	Not used
	10	Power Cord	ADG1208	Not used
	11	Vinyl Bag	AHG1310	AHG-064
	15	Operating Instructions (Spanish/Italian/Dutch)	Not used	ARC1510
	17	Operating Instructions (Japanese/ English/ French)	ARD1052	Not used
	17	Operating Instructions (English/ French/ German)	Not used	ARE1365
	20	Plasma Caution Sheet	ARM1145	Not used
	21	Plasma Caution Sheet	ARM1147	ARM1149
	22	Caution Sheet	ARM1176	Not used
NSP	25	Warranty Card	ARY1102	Not used
NSP	26	Vinyl Pouch	AHG-195	Not used
	36	Ferrite Core	Not used	ATX1031
	42	Label (GUARANTY)	AAX2911	Not used
NSP	44	Accessory Assy	AAX1058	AAX1059

2.2 UNDER LAYER SECTION (1)



UNDER LAYER SECTION (1) parts List

Mark No.	Description	Part No.
1	CLAMP A Assy	AWZ6738
2	CLAMP B Assy	AWZ6739
3	CLAMP C Assy	AWZ6740
4	CLAMP D Assy	AWZ6741
5	Service Panel Assy	AWU1068

Mark No.	Description	Part No.
10	Locking Card Spacer	AEC1736
11	Screw	ABA1301
12	V Cushion	AED1205

6	Wire Saddle	AEC1904
7	Circuit Board Spacer	AEC1872
8	Circuit Board Spacer	AEC1873
NSP 9	PCB Spacer	AEC1121

■ Caution in Replacement of Panel Chassis (50) Assy

Service Panel Assy (AWU1068) is all common use parts of for business, public use and module.
Supply it by the state that installed Circuit Board Spacer (AEC1872) and Wire Saddle (AEC1878) as follows.
Therefore need to remove it in accordance with model.

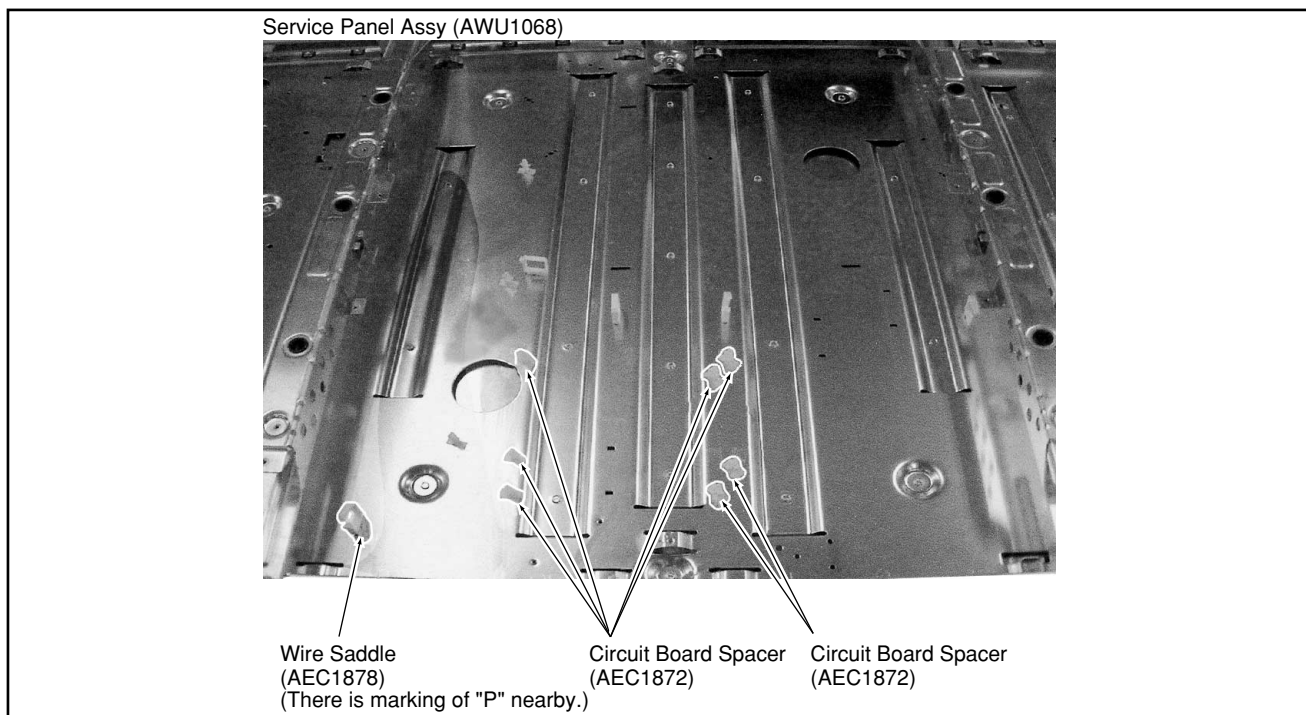
Confirm character carved a seal near the parts, and remove it.

P : Public exclusive use

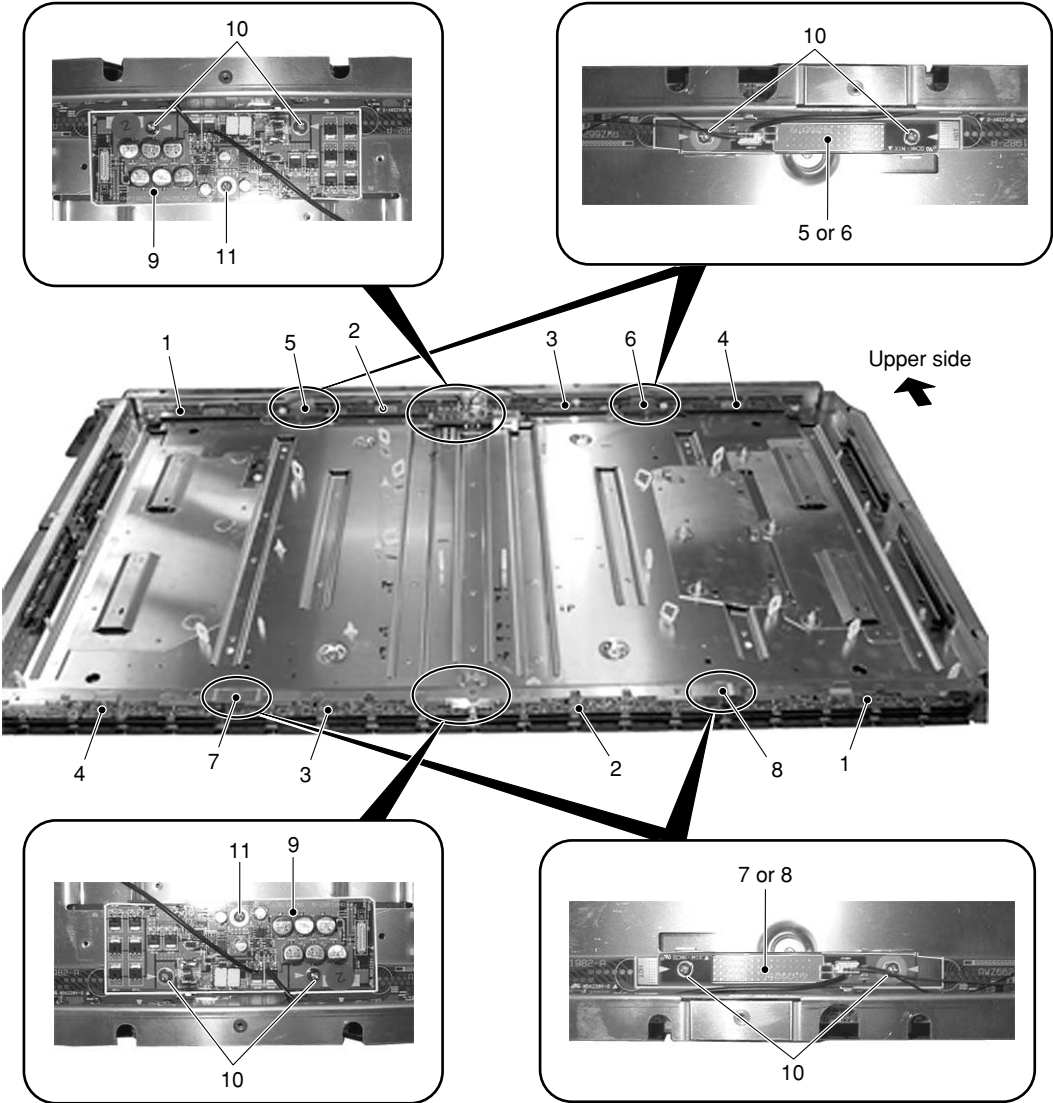
W : Module exclusive use

PW : Common use of public use and module

* In case of this unit, all the parts carved a seal of character removes it.



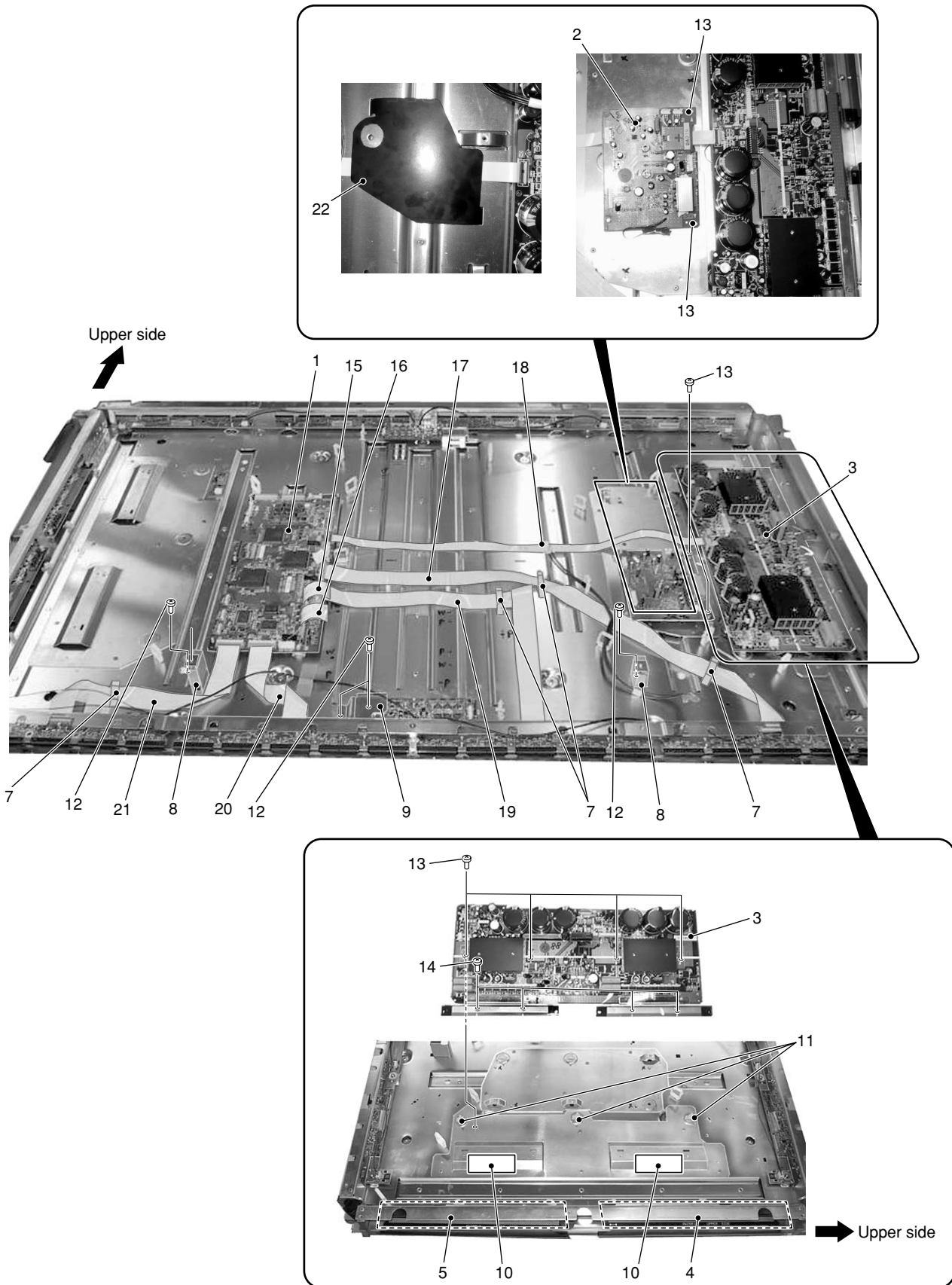
2.3 UNDER LAYER SECTION (2)



UNDER LAYER SECTION (2) parts List

<u>Mark No.</u>	<u>Description</u>	<u>Part No.</u>
NSP 1	ADR CONNECT A Assy	AWZ6626
NSP 2	ADR CONNECT B Assy	AWZ6627
NSP 3	ADR CONNECT C Assy	AWZ6628
NSP 4	ADR CONNECT D Assy	AWZ6629
5	BRIDGE A Assy	AWZ6734
6	BRIDGE B Assy	AWZ6735
7	BRIDGE C Assy	AWZ6736
8	BRIDGE D Assy	AWZ6737
9	ADR RESONANCE Assy	AWZ6750
10	Screw	ABA1301
11	Screw	VBB30P100FNI

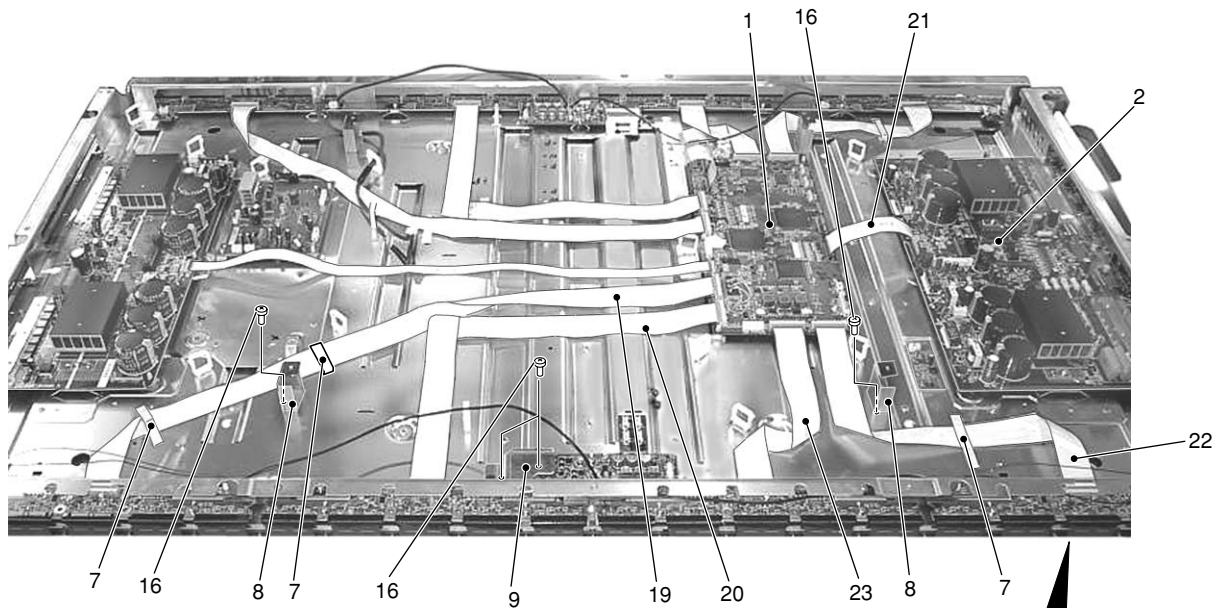
2.4 UNDER LAYER SECTION (3)



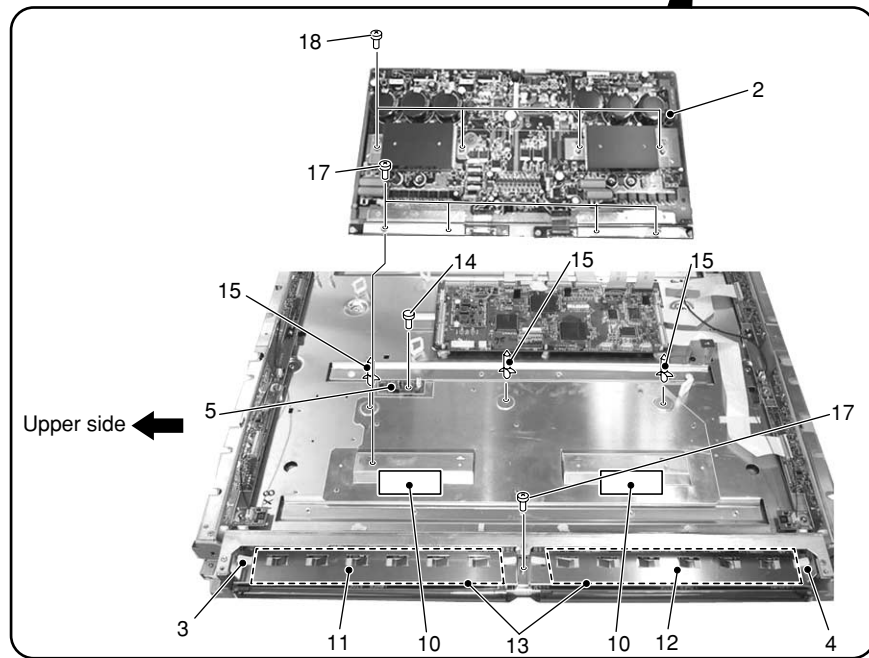
UNDER LAYER SECTION (3) parts List

<u>Mark No.</u>	<u>Description</u>	<u>Part No.</u>
1	DIGITAL VIDEO Assy	AWV1979
2	MX AUDIO Assy	AWZ6644
3	X DRIVE Assy	AWV1984
4	X CONNECTOR (A) Assy	AWZ6732
5	X CONNECTOR (B) Assy	AWZ6733
6	• • • • •	
7	Flat Clamp	AEC1879
NSP 8	Metal Fittings	ANG2464
NSP 9	Heat Sink	ANH1594
10	Coil Silicone Sheet	AEH1048
11	Circuit Board Spacer	AEC1872
12	Screw	ABZ30P060FMC
13	Screw	VBB30P100FNI
14	Screw	PMB30P060FNI
15	J201 Flexible Flat Cable	ADD1183
16	J202 Flexible Flat Cable	ADD1183
17	J209 Flexible Flat Cable	ADD1191
18	J204 Flexible Flat Cable	ADD1196
19	J210 Flexible Flat Cable	ADD1190
20	J211 Flexible Flat Cable	ADD1186
21	J212 Flexible Flat Cable	ADD1188
22	Audio Sheet	AMR3305

2.5 UNDER LAYER SECTION (4)



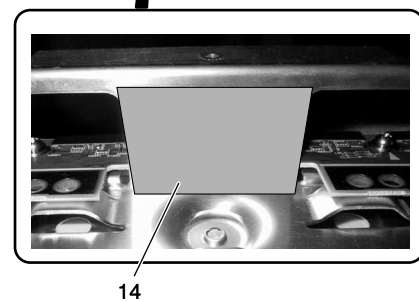
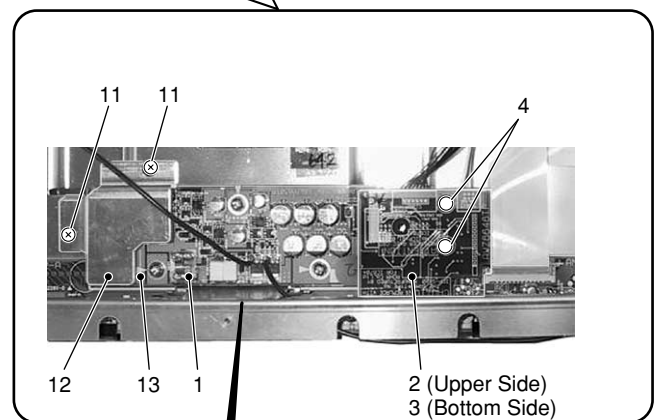
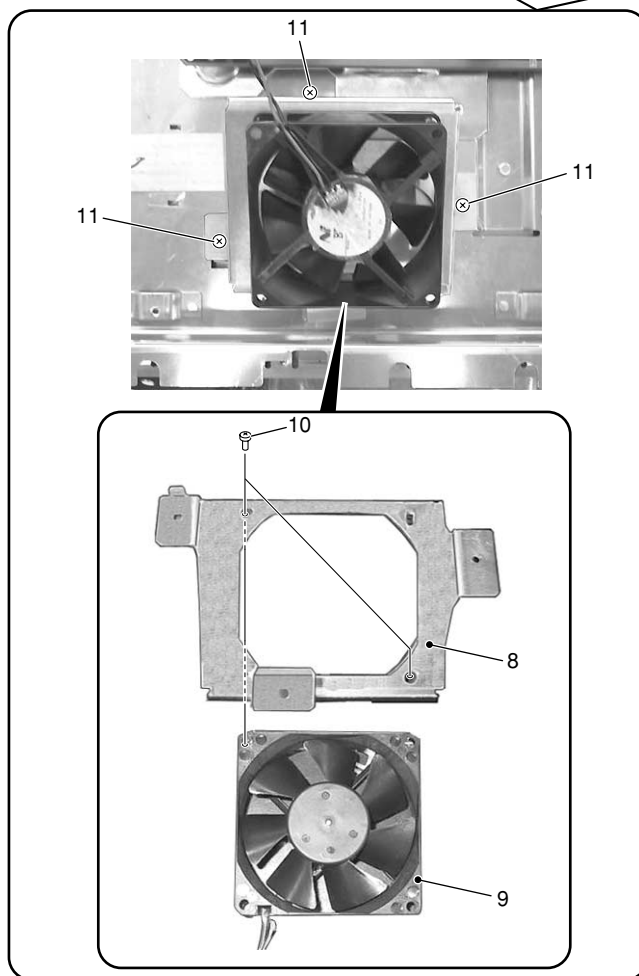
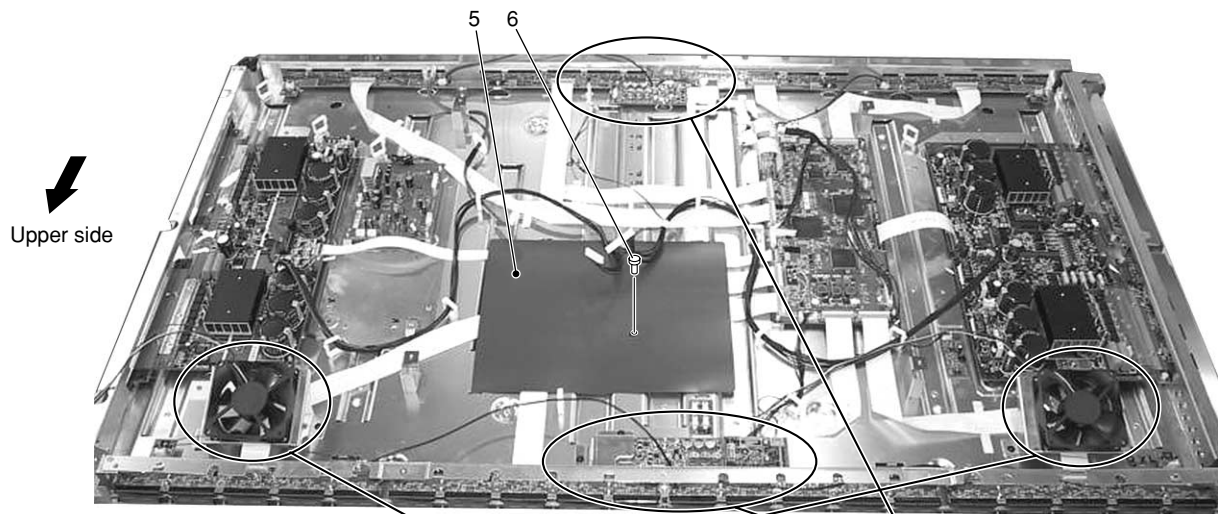
Upper side



UNDER LAYER SECTION (4) parts List

Mark No.	Description	Part No.	Mark No.	Description	Part No.
1	DIGITAL VIDEO Assy	AWV1979	13	Scan Insulation Sheet	AMR3271
2	Y DRIVE Assy	AWZ6745	14	Rivet	BEC1066
3	SCAN (A) Assy	AWZ6722	15	Circuit Board Spacer	AEC1872
4	SCAN (B) Assy	AWZ6723			
5	SENSOR Assy	AWZ6696	16	Screw	ABZ30P060FMC
6	.....		17	Screw	PMB30P060FNI
7	Flat Clamp	AEC1879	18	Screw	VBB30P100FNI
NSP 8	Metal Fittings	ANG2464	19	J208 Flexible Flat Cable	ADD1191
NSP 9	Heat Sink	ANH1594	20	J207 Flexible Flat Cable	ADD1190
F 10	Coil Silicone Sheet	AEH1048	21	J203 Flexible Flat Cable	ADD1184
11	Scan IC Spring (L)	ABK1026	22	J205 Flexible Flat Cable	ADD1189
12	Scan IC Spring (R)	ABK1027	23	J206 Flexible Flat Cable	ADD1187

2.6 UNDER LAYER SECTION (5)



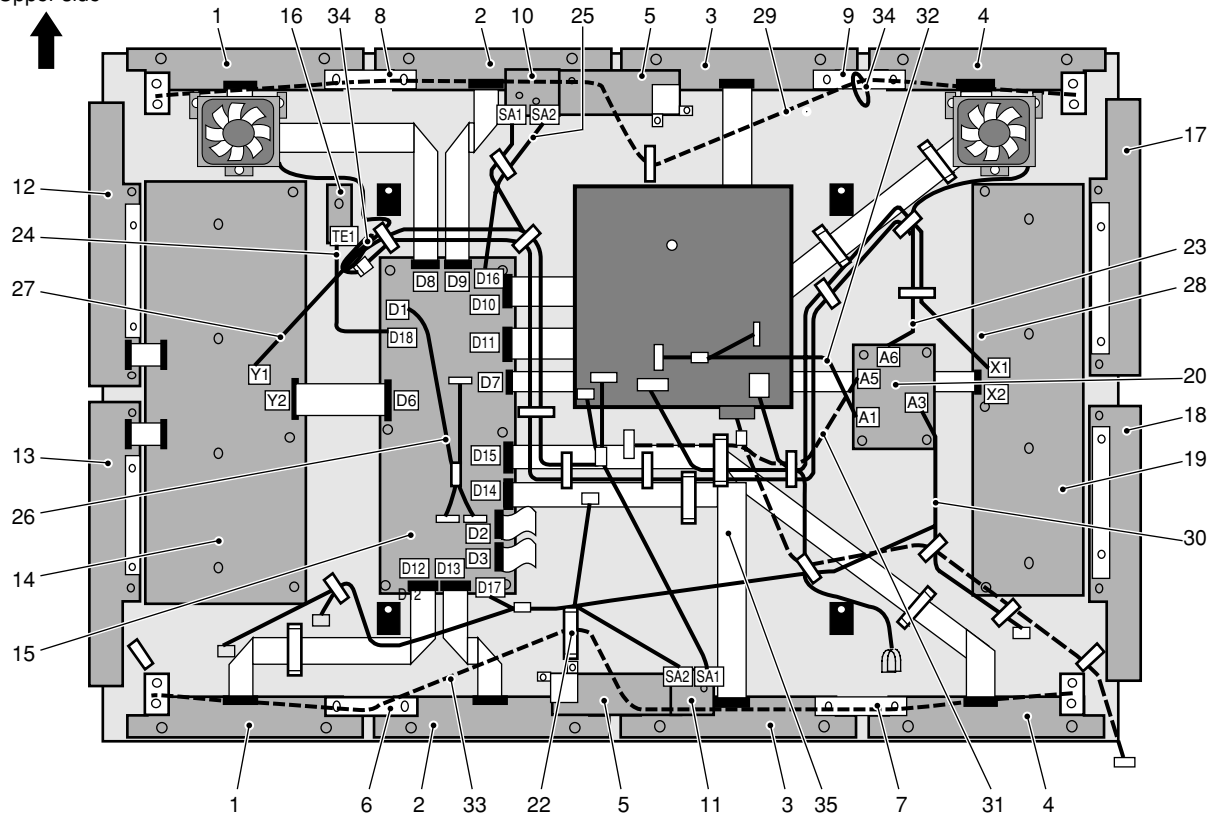
UNDER LAYER SECTION (5) parts List

Mark No.	Description	Part No.
1	ADR RESONANCE Assy	AWZ6750
2	SUB ADDRESS A Assy	AWZ6689
3	SUB ADDRESS B Assy	AWZ6690
4	Circuit Board Spacer	AEC1873
5	Power Sheet	AMR3291
6	Rivet	BEC1066
7	.....

Mark No.	Description	Part No.
NSP 8	Fan Metal	ANG2465
9	Fan Motor	AXM1040
10	Screw	PPZ50P100FZK
11	Screw	ABZ30P060FMC
NSP 12	Heatsink	ANH1594
13	Silicone Sheet	AEH1039
14	Insulating Sheet	AMR3343

2.7 UNDER LAYER SECTION (6)

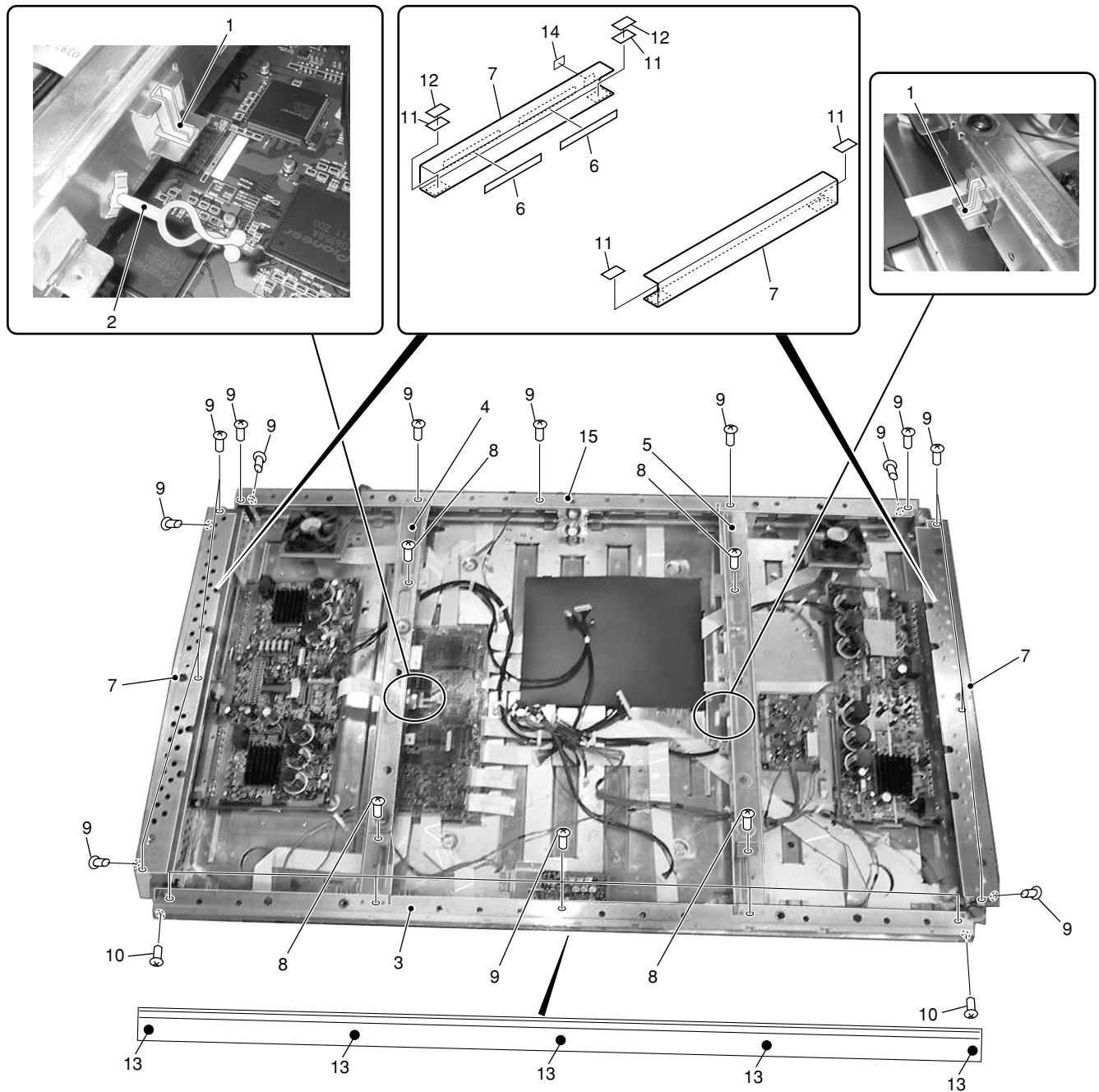
Upper side
↑



MIDDLE LAYER SECTION (1) parts List

Mark No.	Description	Part No.	Mark No.	Description	Part No.
NSP 1	ADR CONNECT A Assy	AWZ6626	19	X DRIVE Assy	AWV1984
NSP 2	ADR CONNECT B Assy	AWZ6627	20	MX AUDIO Assy	AWZ6644
NSP 3	ADR CONNECT C Assy	AWZ6628			
NSP 4	ADR CONNECT D Assy	AWZ6629	21	.....
5	ADR RESONANCE Assy	AWZ6750	22	Flat Clamp	AEC1879
			23	J115 3P Housing Wire	ADX2705
6	BRIDGE A Assy	AWZ6734	24	J110 3P Housing Wire	ADX2704
7	BRIDGE B Assy	AWZ6735	25	J108 8P Housing Wire	ADX2811
8	BRIDGE C Assy	AWZ6736			
9	BRIDGE D Assy	AWZ6737	26	J101 Wire F	ADX2695
10	SUB ADDRESS A Assy	AWZ6689	27	J102 Wire E	ADX2782
			28	J103 13P Housing Wire	ADX2700
11	SUB ADDRESS B Assy	AWZ6690	29	J116 4P Housing SP Wire	ADX2756
12	SCAN (A) Assy	AWZ6722	30	J109 Wire G	ADX2696
13	SCAN (B) Assy	AWZ6723			
14	Y DRIVE Assy	AWZ6745	31	J111 Wire I	ADX2698
15	DIGITAL VIDEO Assy	AWV1979	32	J104 Wire H	ADX2697
			33	J117 4P Housing SP Wire	ADX2756
16	SENSOR Assy	AWZ6696	34	Binder	AEC-093
17	X CONNECTOR (A) Assy	AWZ6732	35	J118 5P Housing Wire	ADX2776
18	X CONNECTOR (B) Assy	AWZ6733			

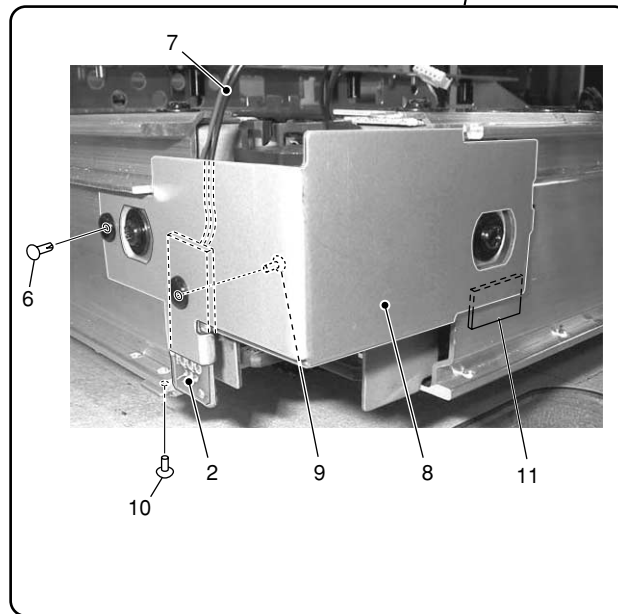
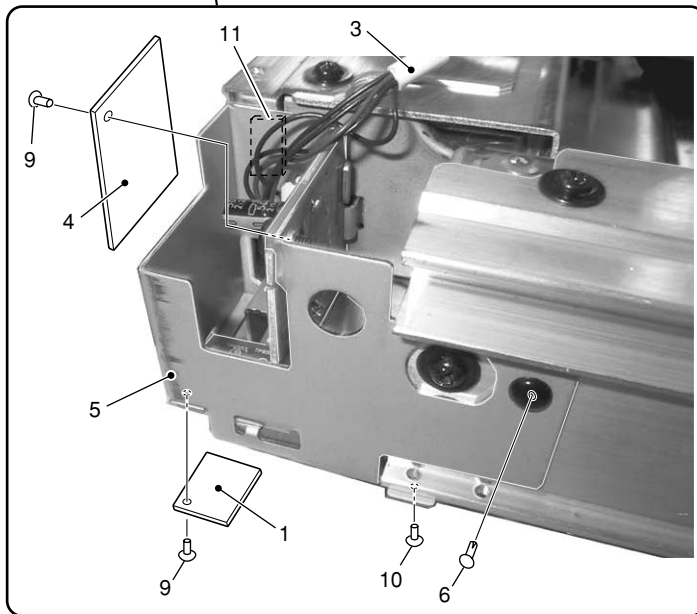
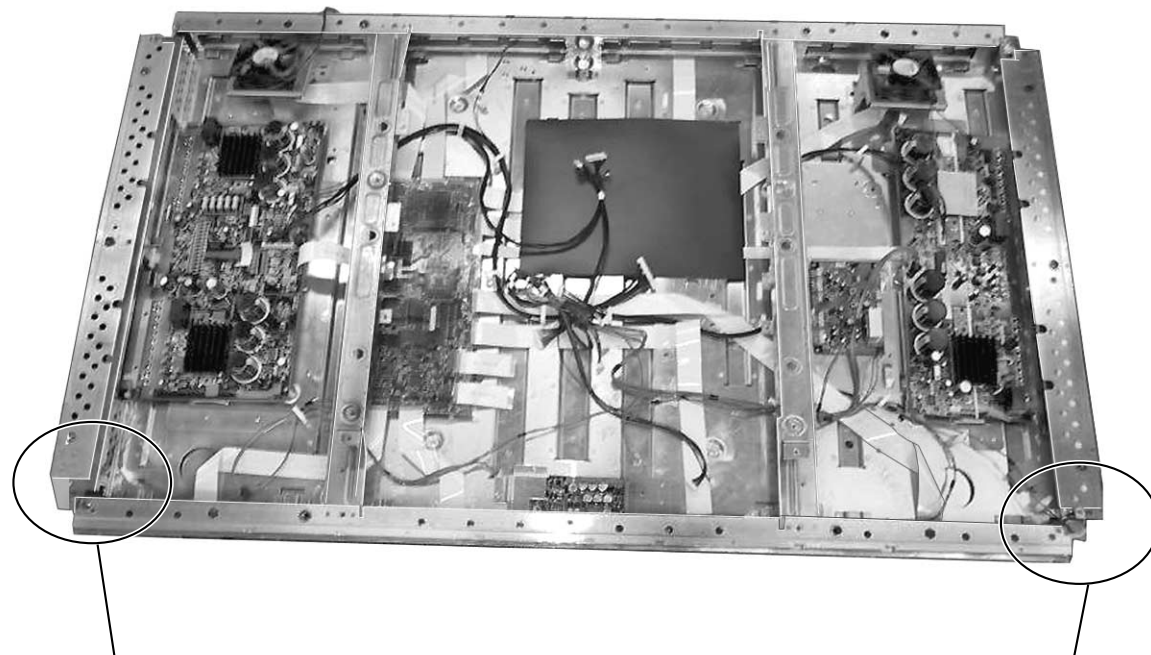
2.8 MIDDLE LAYER SECTION (1)



MIDDLE LAYER SECTION (2) parts List

Mark No.	Description	Part No.	Mark No.	Description	Part No.
1	Card Corner Holder	BEC1144	11	V Cushion	AED1205
2	Niplocker	BEC1136	12	Gasket R	ANK1695
NSP 3	Front Chassis H	ANA1683	NSP 13	Spacer	AEC1902
4	Sub Frame L	ANG2455	14	Seet C	AEC1927
5	Sub Frame R	ANG2456	NSP 15	Front Chassis HU	ANA1697
6	FPC Cushion	AEB1370			
NSP 7	Front Chassis V	ANA1661			
8	Screw	AMZ30P060FZK			
9	Screw	ABA1294			
10	Screw	BMZ30P060FMC			

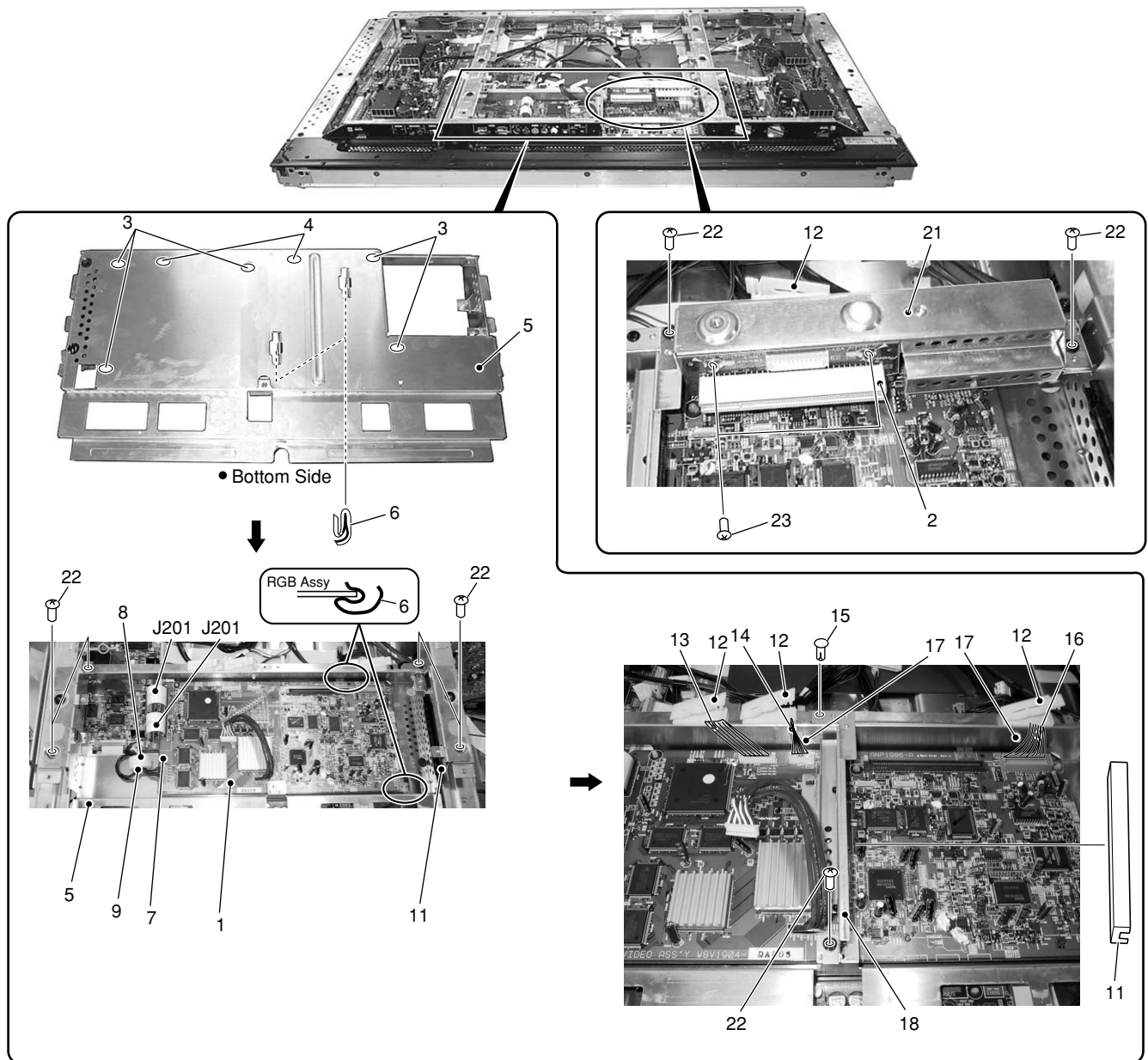
2.9 MIDDLE LAYER SECTION (2)



MIDDLE LAYER SECTION (2) parts List

Mark No.	Description	Part No.
1	IR Assy	AWZ6643
2	MX LED Assy	AWZ6642
3	J113 Wire J	ADX2699
4	KEY CONNECTOR Assy	AWZ6695
NSP 5	IR Holder	ANG2494
6	Nylon Rivet	AEC1671
7	J111 Wire I	ADX2698
NSP 8	Switch Holder	ANG2493
9	Screw	BMZ30P040FMC
10	Screw	ABZ30P050FZK
11	Gasket R	ANK1695

2.10 MIDDLE LAYER SECTION (3)

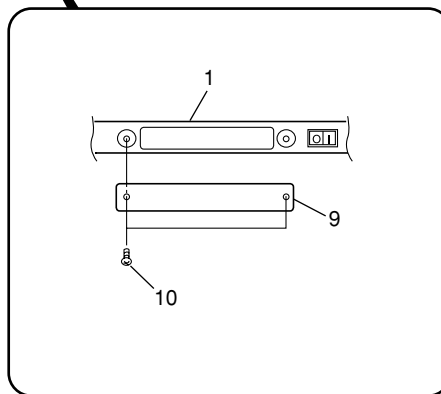
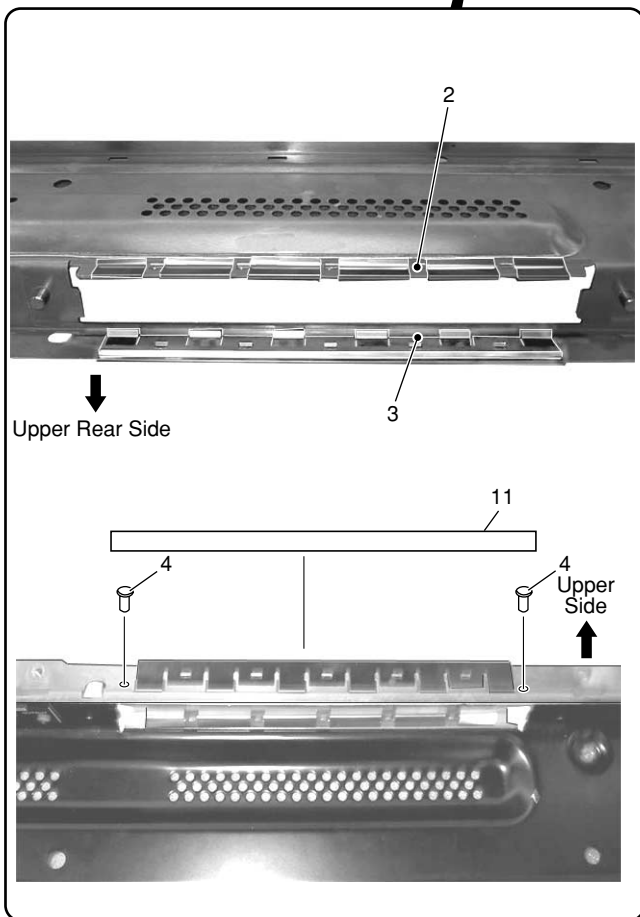
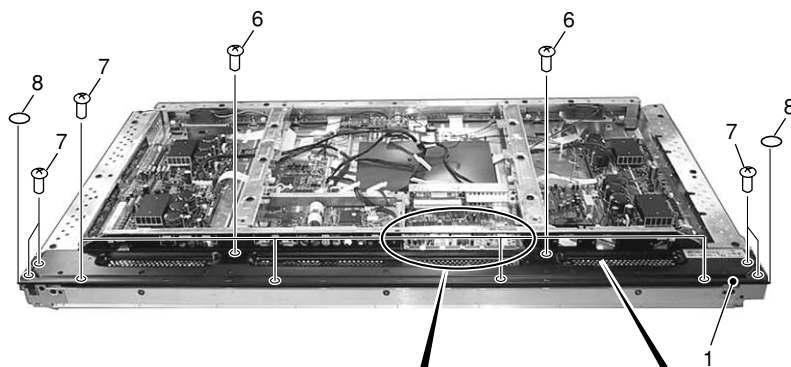


MIDDLE LAYER SECTION (3) parts List

Mark No.	Description	Part No.
1	RGB Assy	AWZ6744
2	SLOT CONNECTOR Assy	AWZ6634
3	Spacer	AEC1065
4	Card Spacer	AEC1882
NSP 5	RGB Base	ANA1662
6	Ground Finger	ANG2468
7	Card Spacer	AEC1899
8	Ferrite Core (L3)	ATX1037
9	Ferrite Core Holder	AEC1818
10	.....
11	Guide Rail EX	AEC1900
12	Clamp	AEC1884
13	J107 12P Housing Wire	ADX2702
14	J109 Wire G	ADX2696
15	Nylon Rivet	AEC1671

Mark No.	Description	Part No.
16	J111 Wire I	ADX2698
17	Wire Saddle	AEC1745
NSP 18	Video Stay	AND1171
19	.....
20	.....
NSP 21	PCB Stay	AND1170
22	Screw	AMZ30P060FZK
23	Screw	VBB30P100FNI

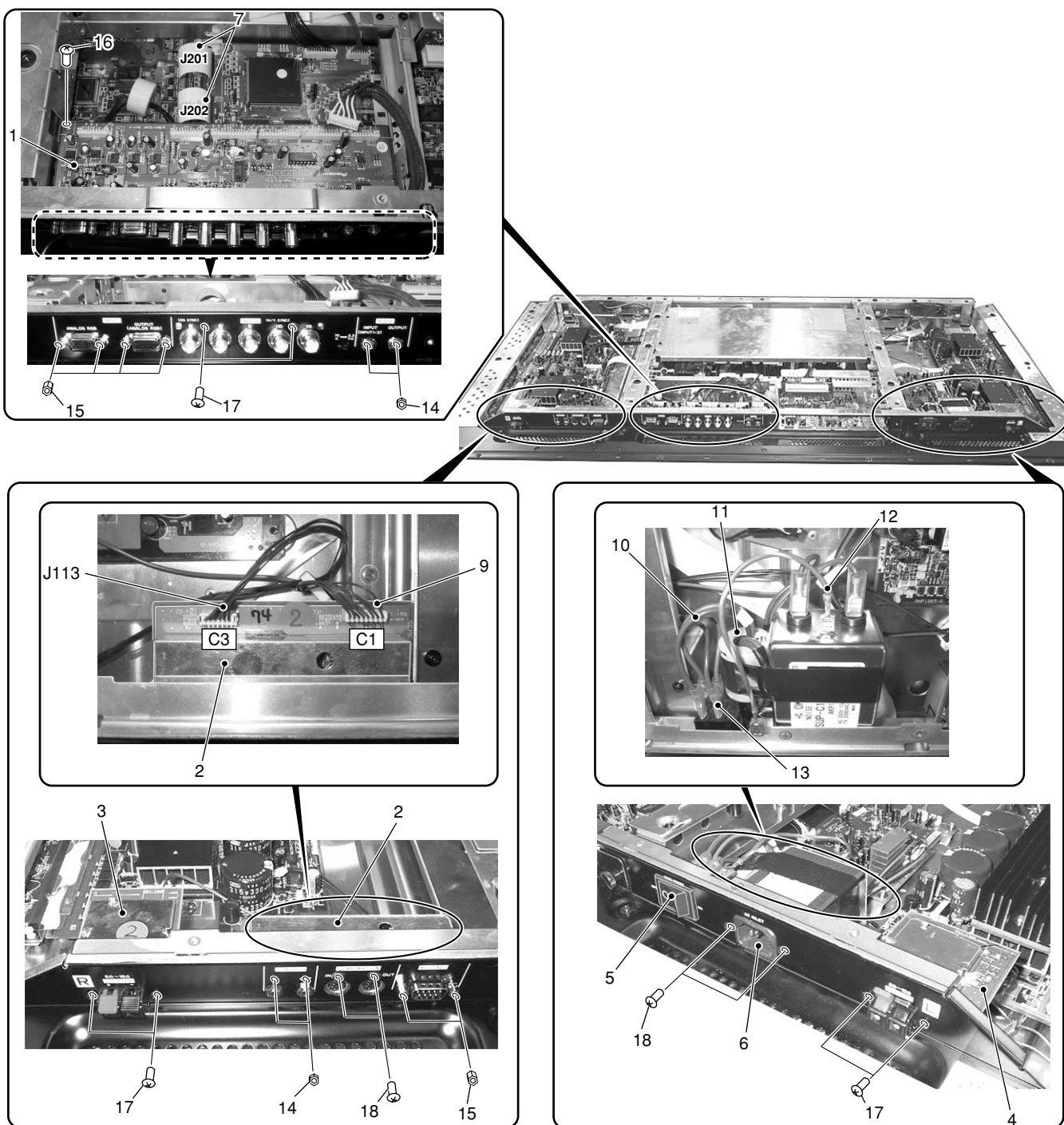
2.11 MIDDLE LAYER SECTION (4)



MIDDLE LAYER SECTION (2) parts List

Mark No.	Description	Part No.
1	Terminal Panel	ANG2538
2	Slot Spring (Under)	ABK1028
3	Slot Spring (Upper)	ABK1031
4	Card Spacer	AEC1898
5	.....
6	Screw	AMZ30P060FZK
7	Screw	TBZ40P080FZK
8	Rear Corner Label	AAX2862
9	Expansion Slot Cover	ANG2536
10	Screw	BMZ30P060FZK
11	Gasket S	ANK1699

2.12 UPPER LAYER SECTION (1)

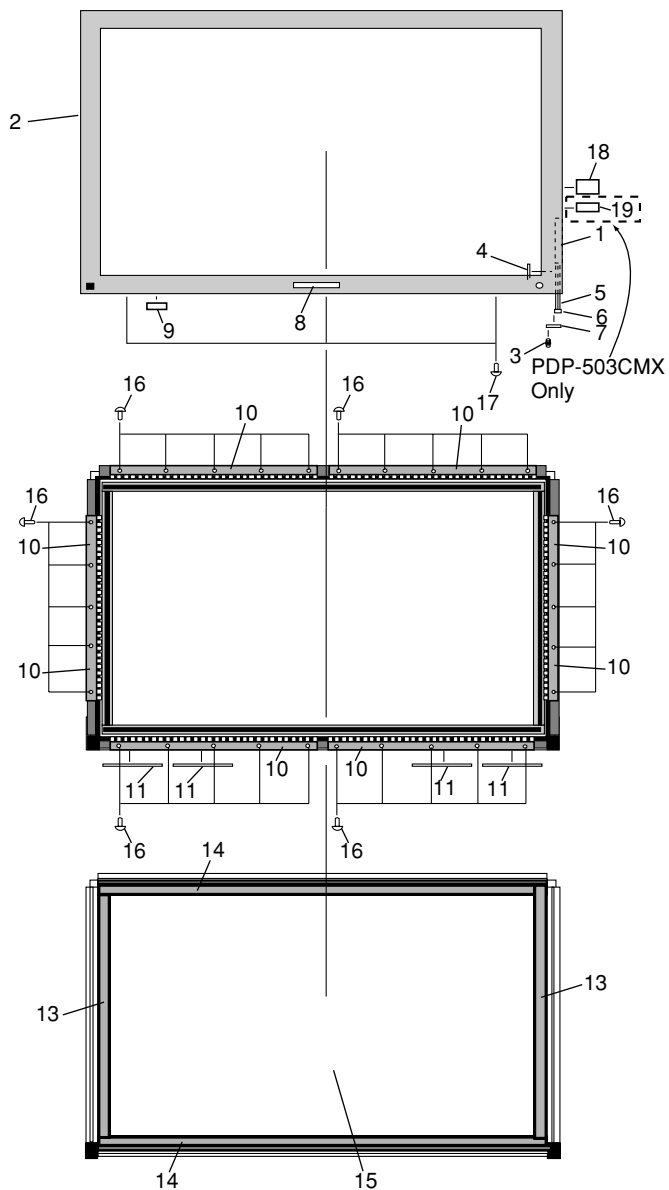


UPPER LAYER SECTION (1) parts Lis

Mark No.	Description	Part No.
1	I/O Assy	AWZ6631
2	CONTROL Assy	AWZ6633
3	SP OUT R Assy	AWZ6706
4	SP OUT L Assy	AWZ6705
5	Power Switch (S1)	BSM1006
6	AC Inlet with Filter (CN1)	AKP1223
7	J201, J202 Flexible Cable	ADD1183
8	.....
9	J109 Wire G	ADX2696
10	J106 Wire C	ADX2693

Mark No.	Description	Part No.
11	Ferrite Core (L1)	ATX1032
12	J114 Earth Wire	ADX2709
13	J105 Wire B	ADX2692
14	Hexagonal Nut	ABN1035
15	Hexagonal Head Screw	BBA1051
16	Screw	PMB30P060FNI
17	Screw	BPZ30P080FZK
18	Screw	BMZ30P060FZK

2.14 FRONT CASE SECTION



FRONT CASE SECTION parts List

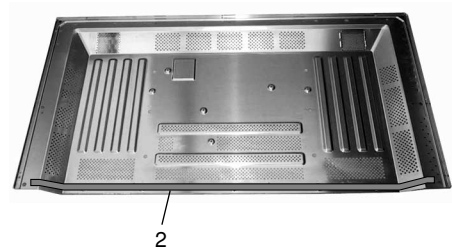
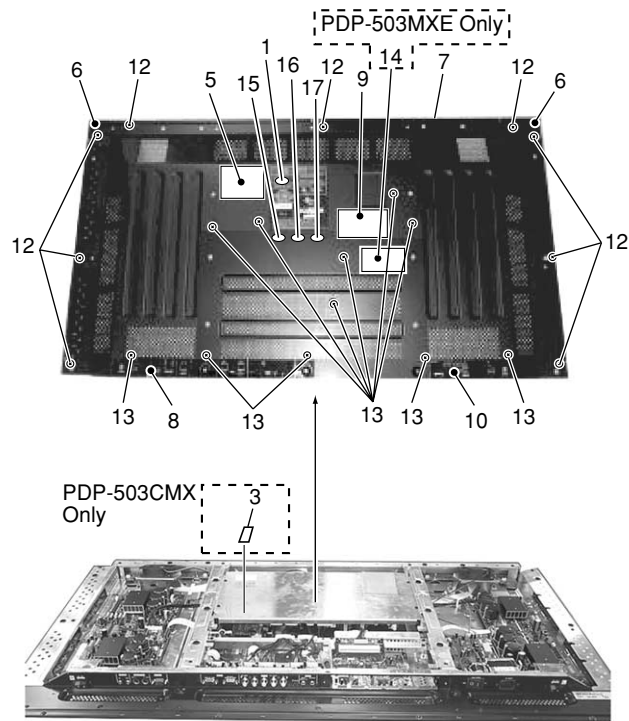
Mark No.	Description	Part No.	Mark No.	Description	Part No.
1	SIDE KEY Assy	AWZ6637	11	Front Spacer	AEC1896
2	Front Case 50 (M)	AMB2698	12	•••••	
3	Rivet	AEC1877	13	Panel Cushion V	AED1199
4	Flexible Seal	AEH1036	14	Panel Cushion H	AED1198
5	J213 Flexible Cable	ADD1195	15	Protect Panel Assy	AMR3304
6	Ferrite Core (L4)	ATX1043	16	Screw	ABZ30P050FZK
7	Lead Cover (MX)	AMB2703	17	Screw	VMZ30P060FZK
8	Pioneer Badge	AAM1091	18	Energy Star Label	AAX2856
9	Serial Label	AAX2609	NSP 19	Display Label	See Contrast table (2)
NSP 10	Panel Holder	ANG2508			

(2) CONTRAST TABLE

PDP-503CMX/LUCB and PDP-503MXE/YVLDK are constructed the same except for the following :

Mark	No.	Symbol and Description	PDP-503CMX/ LUCB	PDP-503MXE/ YVLDK
NSP	19	Display Label	AAX2836	Not used

2.15 REAR SECTION



REAR SECTION parts List

Mark No.	Description	Part No.	Mark No.	Description	Part No.
NSP 1	Name Label	See Contrast table (2)	10	Terminal Display Label L	See Contrast table (2)
2	Gascket A	ANK1701	11	.....
3	Solder Warning Label	See Contrast table (2)	12	Screw	TBZ40P080FZK
4	.....		13	Screw	AMZ30P060FZK
5	Cleaning Label	AAX2926	14	Korean Label	See Contrast table (2)
6	Rear Corner Label	AAX2862	15	Label (BLUE)	AAX2787
7	Rear Case (50M)	ANE1610	16	Label (SILBER)	AAX2816
8	Terminal Display Label R	AAX2931	17	Label (GREEN)	AAX2955
9	Bolt Caution Label	AAX2928			

(2) CONTRAST TABLE

PDP-503CMX/LUCB and PDP-503MXE/YVLDK are constructed the same except for the following :

Mark	No.	Symbol and Description	PDP-503CMX/ LUCB	PDP-503MXE/ YVLDK
NSP	1	Name Label Gray	AAL2418	AAL2419
	3	Solder Warning Label	AAX2644	Not used
	10	Terminal Label Lgray	AAX2932	AAX2933
	14	Korean Label	Not used	AAX2944

2.16 PANEL CHASSIS (50) ASSY (AWU1066)

Panel Chassis (50) Assy (AWU1066) consists of the following parts.

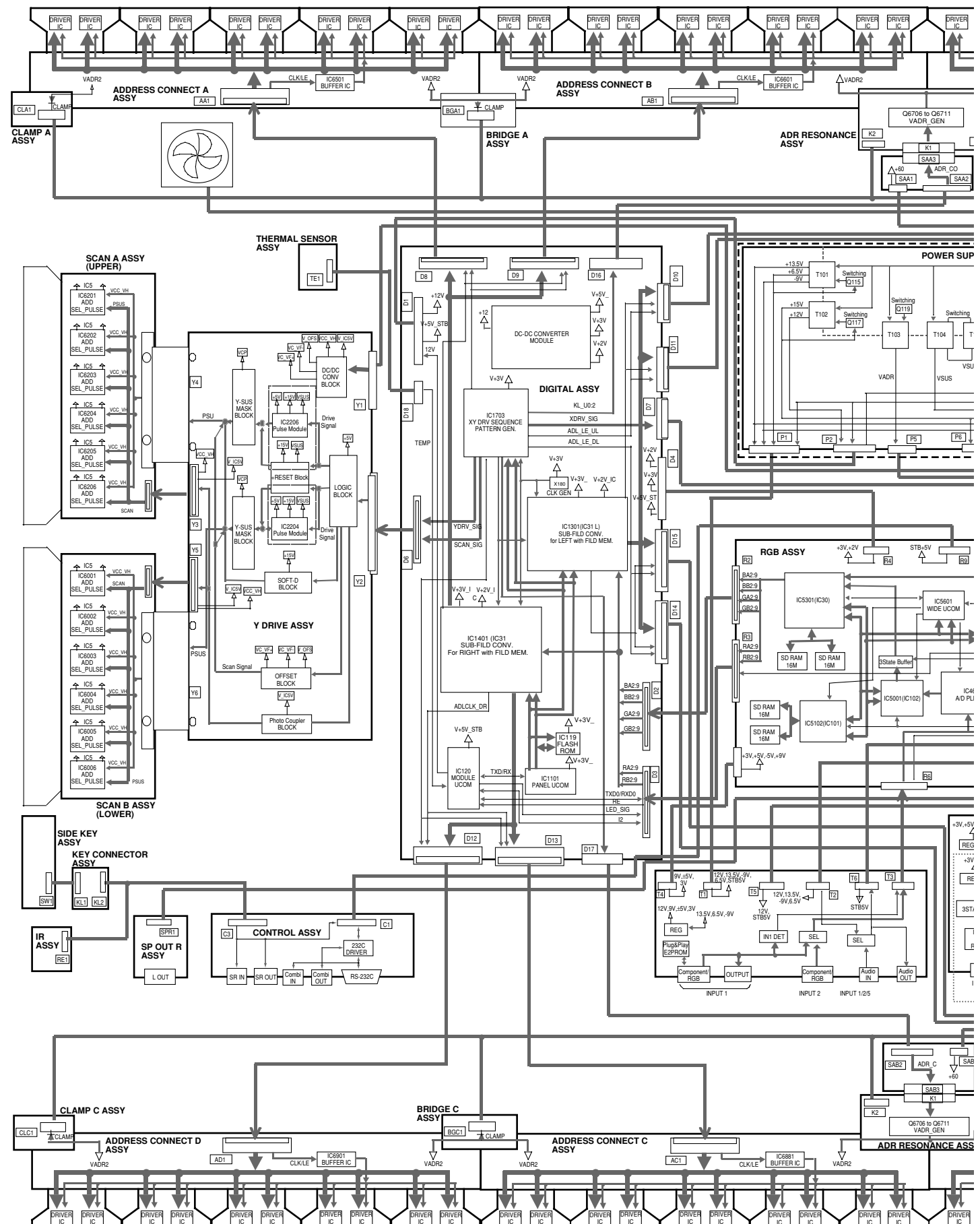
• Parts List

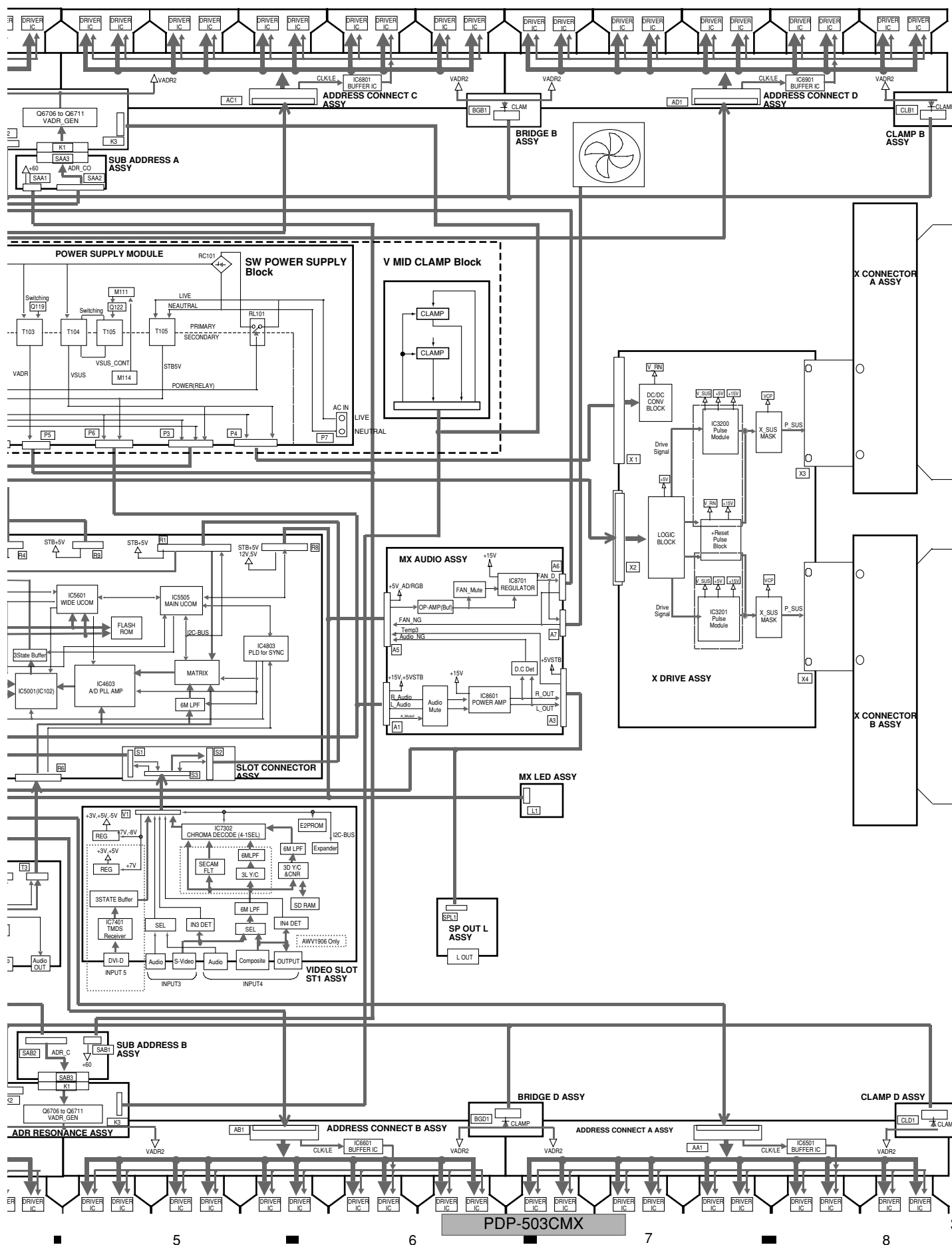
Mark No.	Description	Part No.
NSP	SCAN FUKUGO ASSY	AWV1968 *
NSP	ADDRESS FUKUGO ASSY	AWV1900 *
NSP	Address Module (IC1 - IC40)	AXF1114
NSP	FPC (0003)	ADY1065
NSP	FPC (J0001)	ADY1066
NSP	1..Chassis Assy	ANA1711
NSP	2..Chassis	ANA1655
NSP	2..Base Chassis	ANA1656
NSP	2..Scan Heatsink	ANH1609
NSP	2..Corner Angle A	ANG2457
NSP	2..Corner Angle B	ANG2458
	2..Sheet A	AEC1923
	2..Sheet B	AEC1924
NSP	2..Tube Cover	AMR3262
	2..Rear Coner Label	AAX2862
	2..Siricon Sheet 50	AEH1037
	2..Adhesive Tape 50	AEH1038
	2..Adhesive Tape B (50)	AEH1051
	2..Panel Siricon Sheet	AEH1055
	Pin Grommet	AEC1015
NSP	Protection Tape	AEH1059
	Scan Siricon Sheet	AEH1057
NSP	Plasma Panel Assy	AAV1238
	Screw	VBB30P100FNI

• List of Assy

Mark	Description	Part No.
NSP	1..SCAN FUKUGO ASSY	AWV1968
	2..SCAN (A) ASSY	AWZ6722
	2..SCAN (B) ASSY	AWZ6723
	2..X CONNECTOR (A) ASSY	AWZ6732
	2..X CONNECTOR (B) ASSY	AWZ6733
	2..BRIDGE A ASSY	AWZ6734
	2..BRIDGE B ASSY	AWZ6735
	2..BRIDGE C ASSY	AWZ6736
	2..BRIDGE D ASSY	AWZ6737
	2..CLAMP A ASSY	AWZ6738
	2..CLAMP B ASSY	AWZ6739
	2..CLAMP C ASSY	AWZ6740
	2..CLAMP D ASSY	AWZ6741
NSP	1..ADDRESS FUKUGO ASSY	AWV1900
NSP	2..ADR CONNECT A ASSY	AWZ6626
NSP	2..ADR CONNECT B ASSY	AWZ6627
NSP	2..ADR CONNECT C ASSY	AWZ6628
NSP	2..ADR CONNECT D ASSY	AWZ6629
	2..ADR RESONANCE ASSY	AWZ6750

3.1.1 OVERALL DIAGRAM





3.1.2 RGB ASSY

A

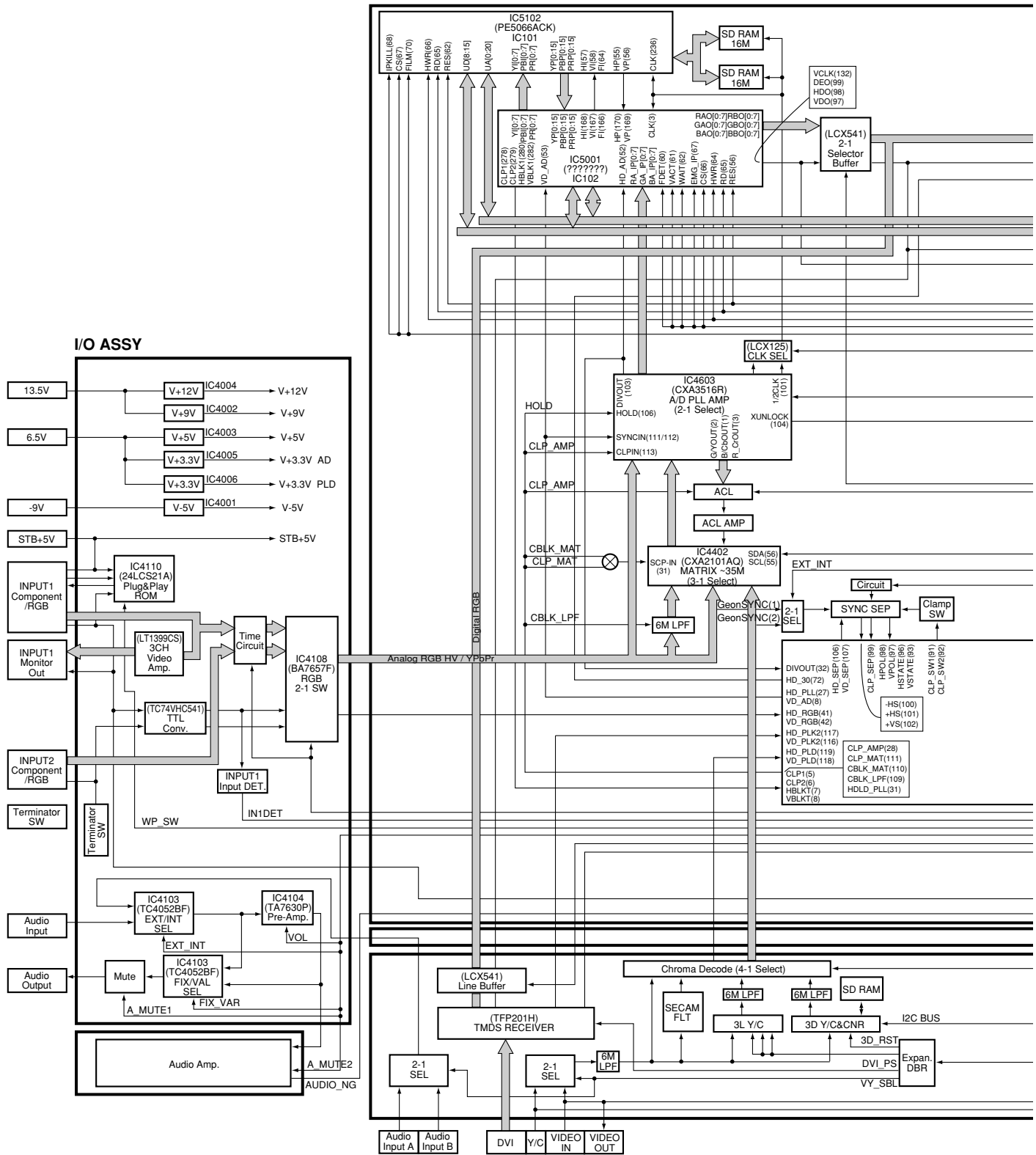
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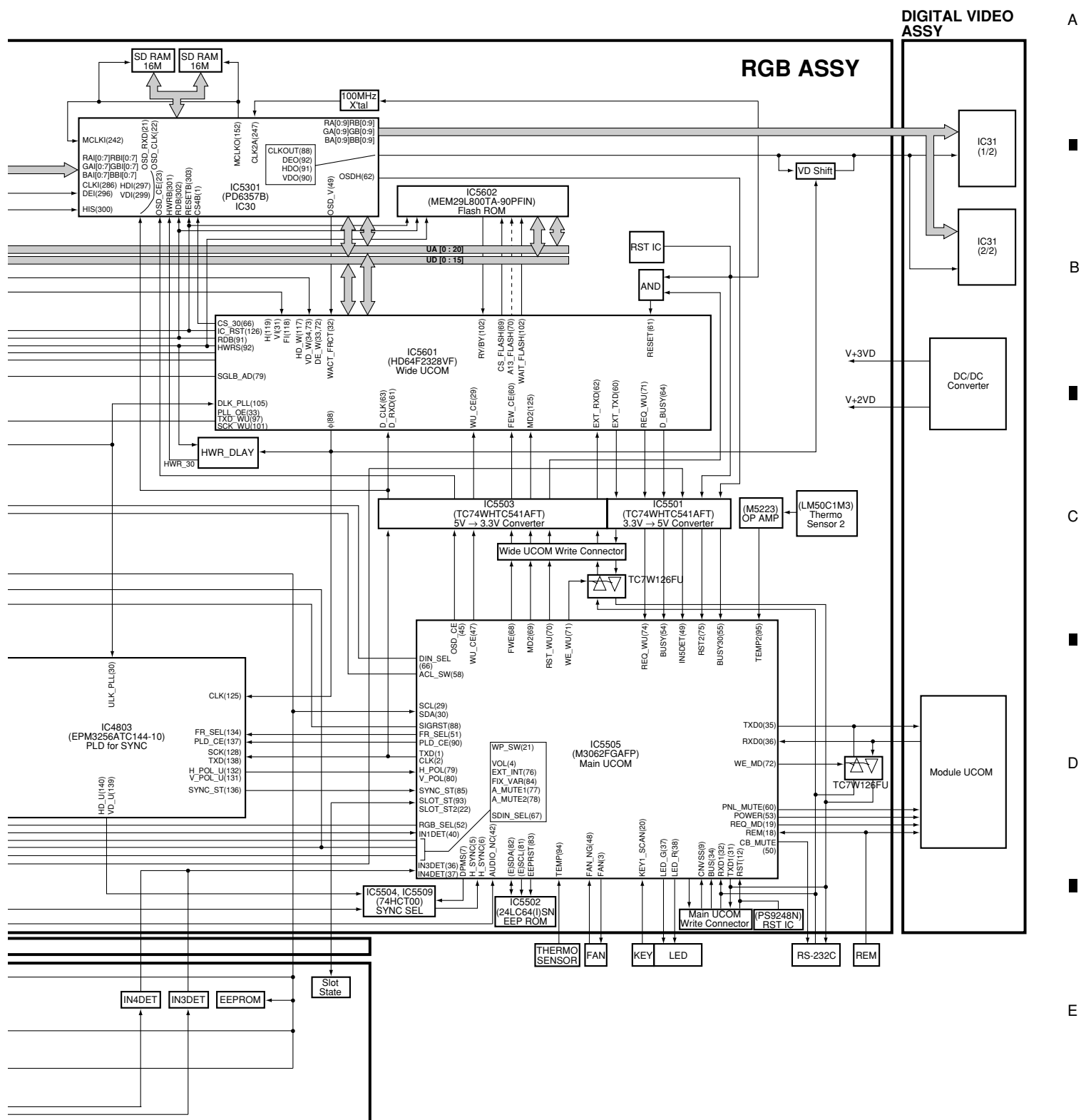
C

D

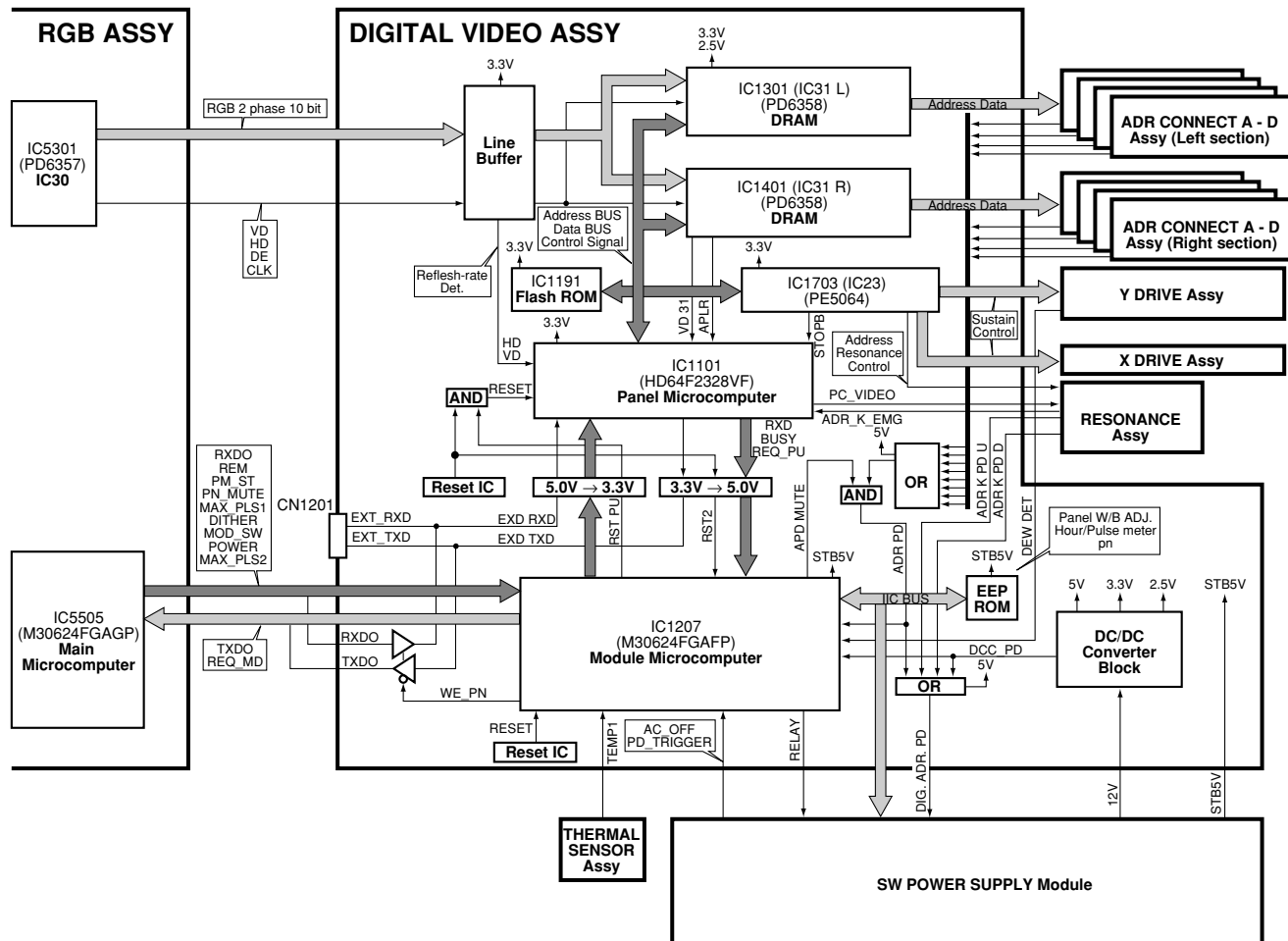
E

F

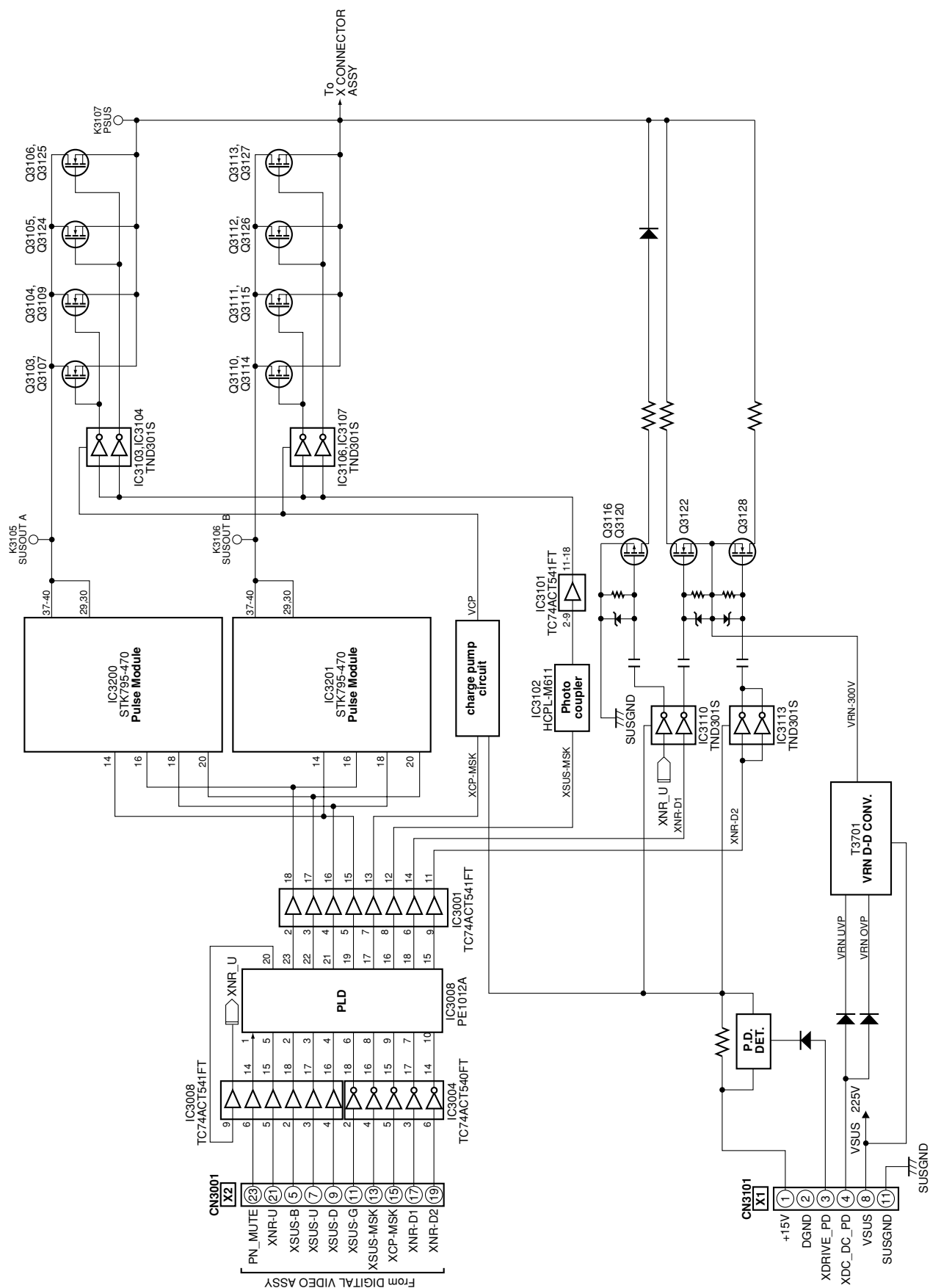




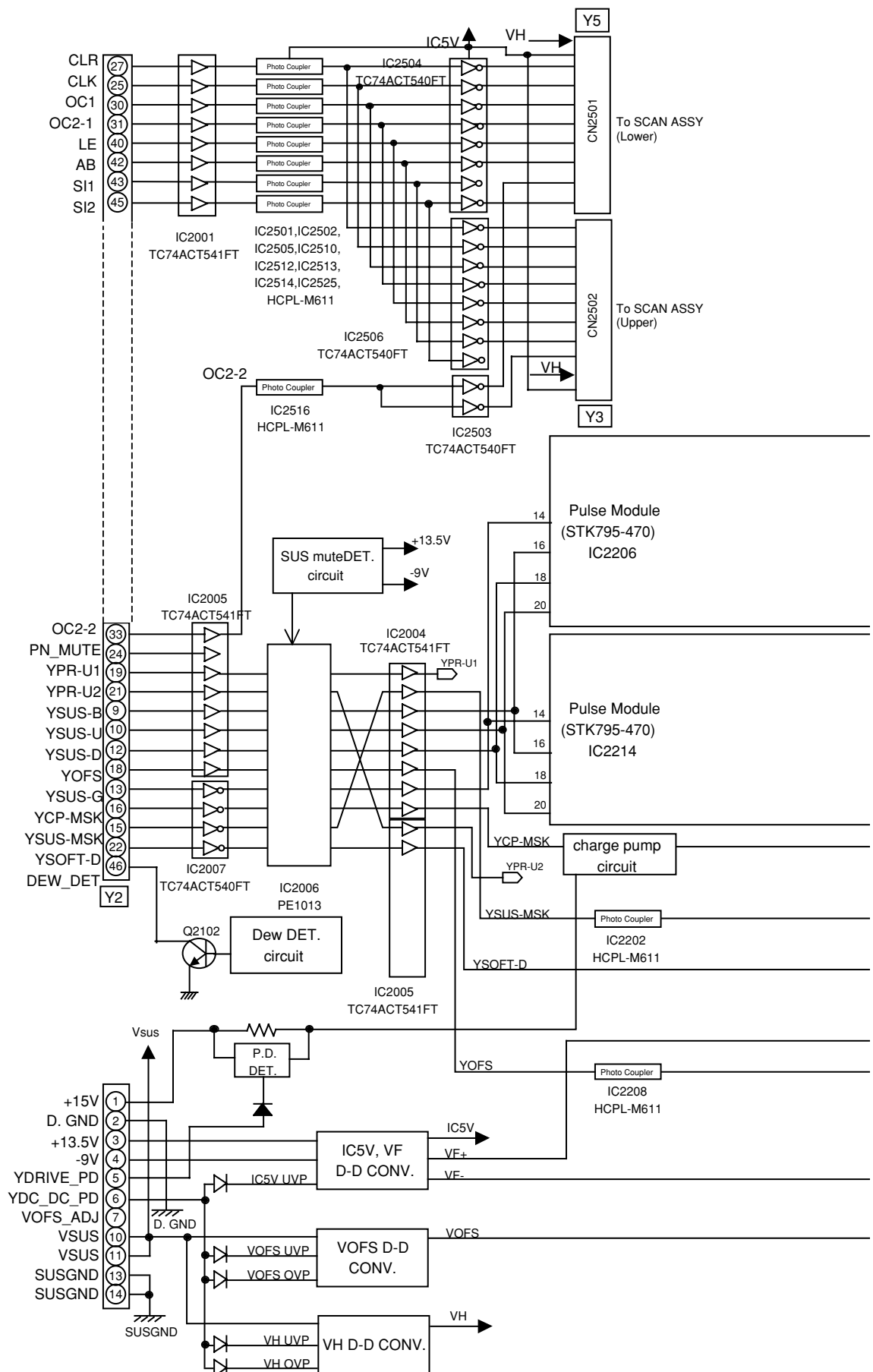
3.1.3 DIGITAL VIDEO ASSY

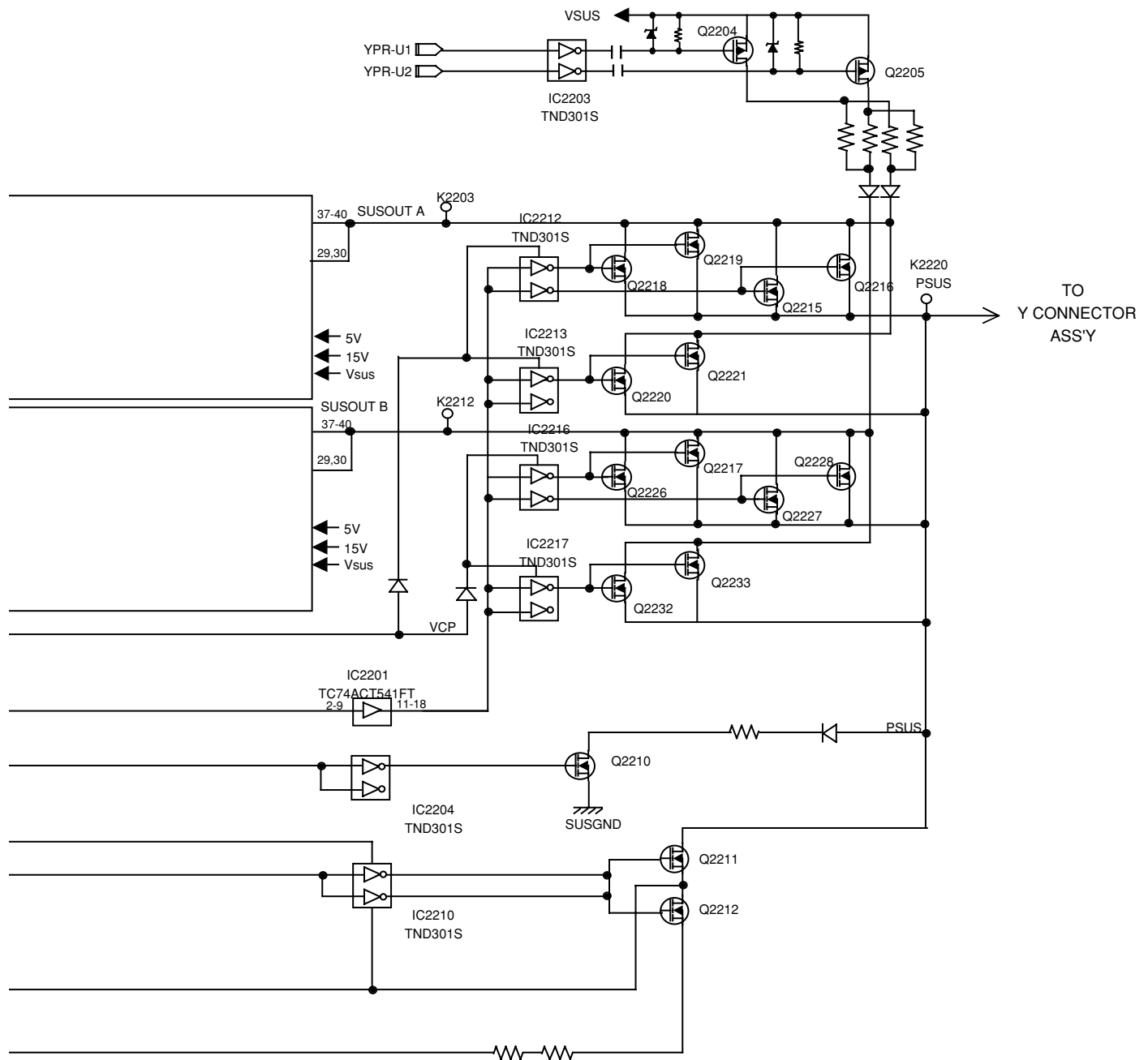


3.1.4 X DRIVE ASSY



3.1.5 Y DRIVE ASSY





3.1.6 MX AUDIO ASSY

A

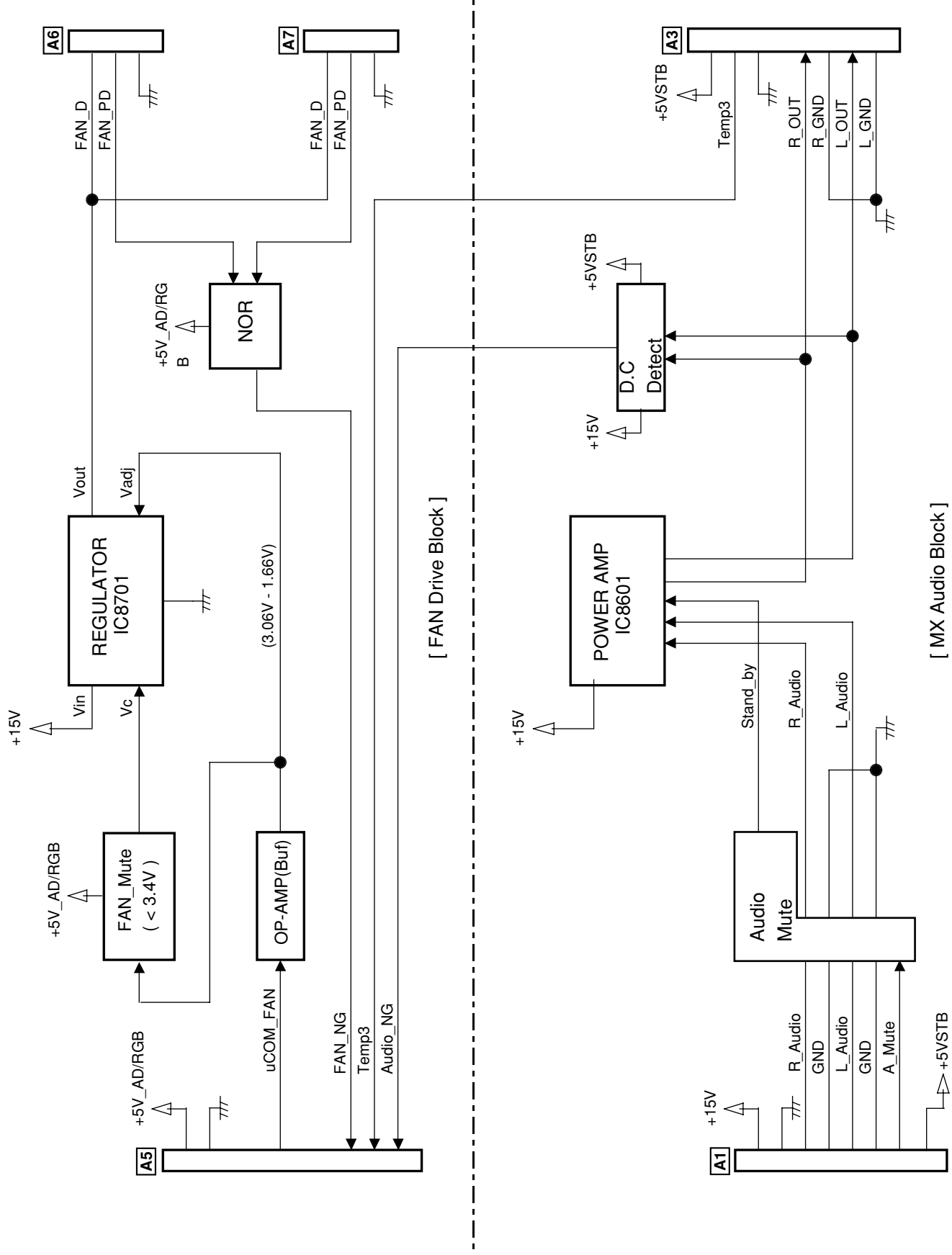
B

C

D

E

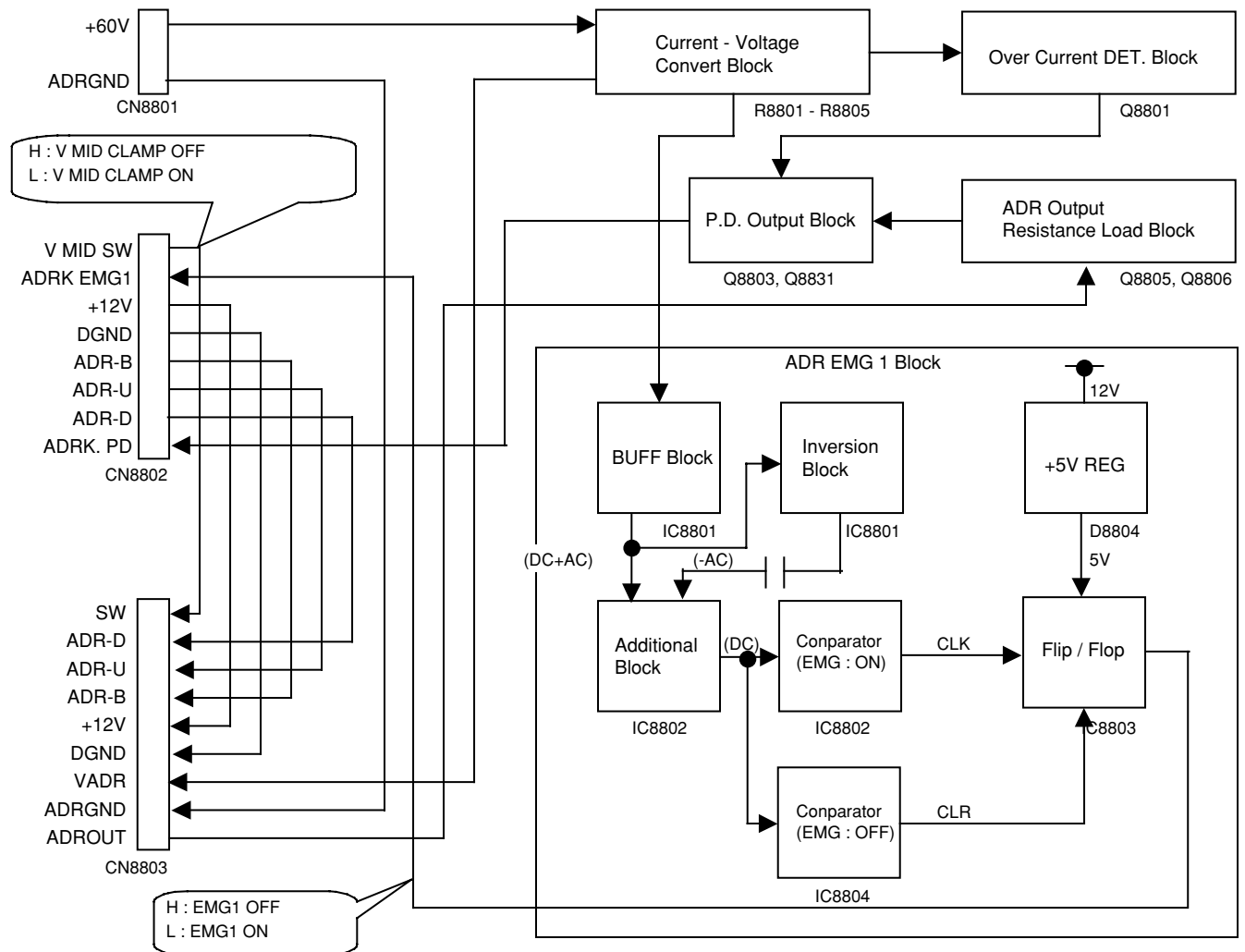
F



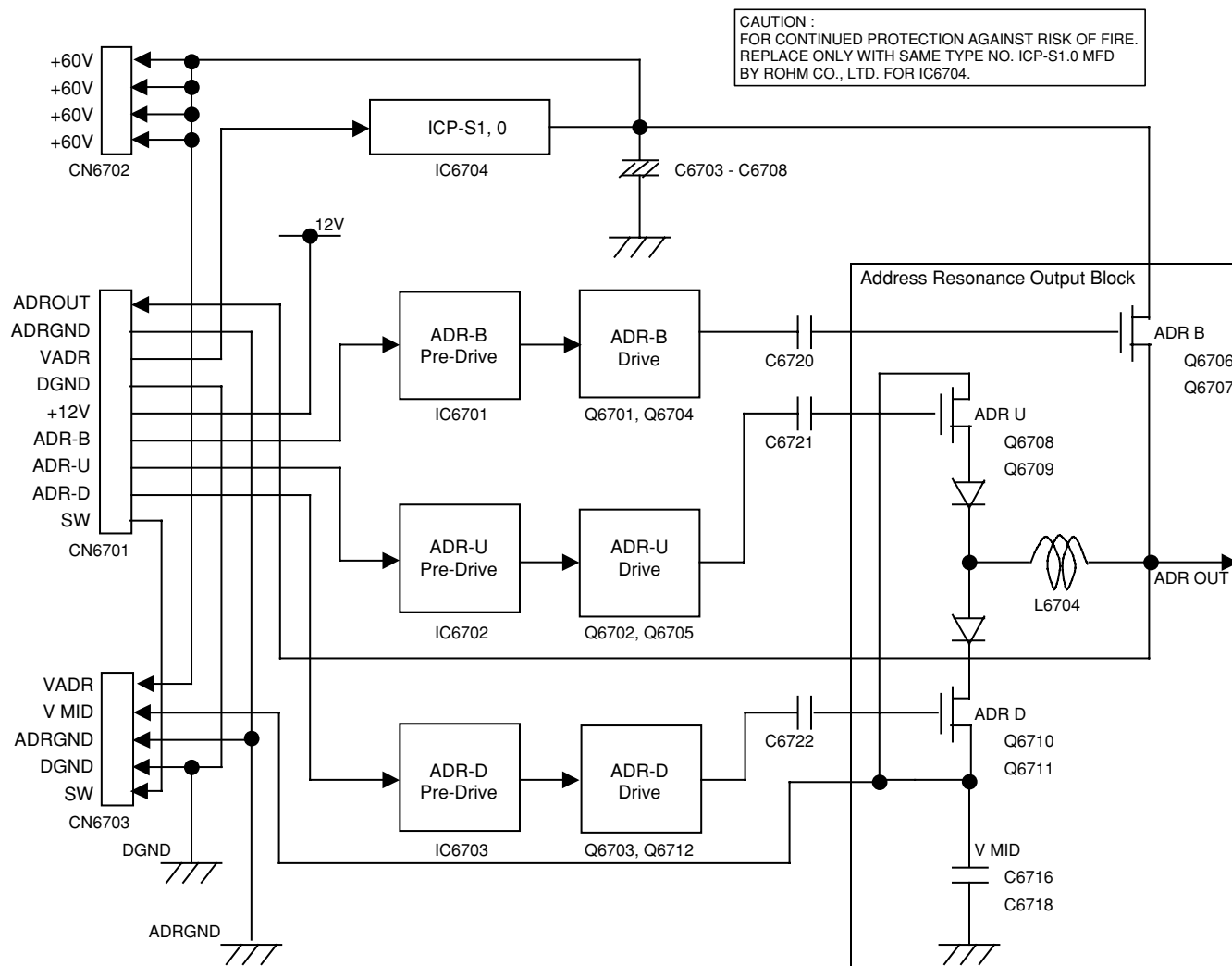
[FAN Drive Block]

[MX Audio Block]

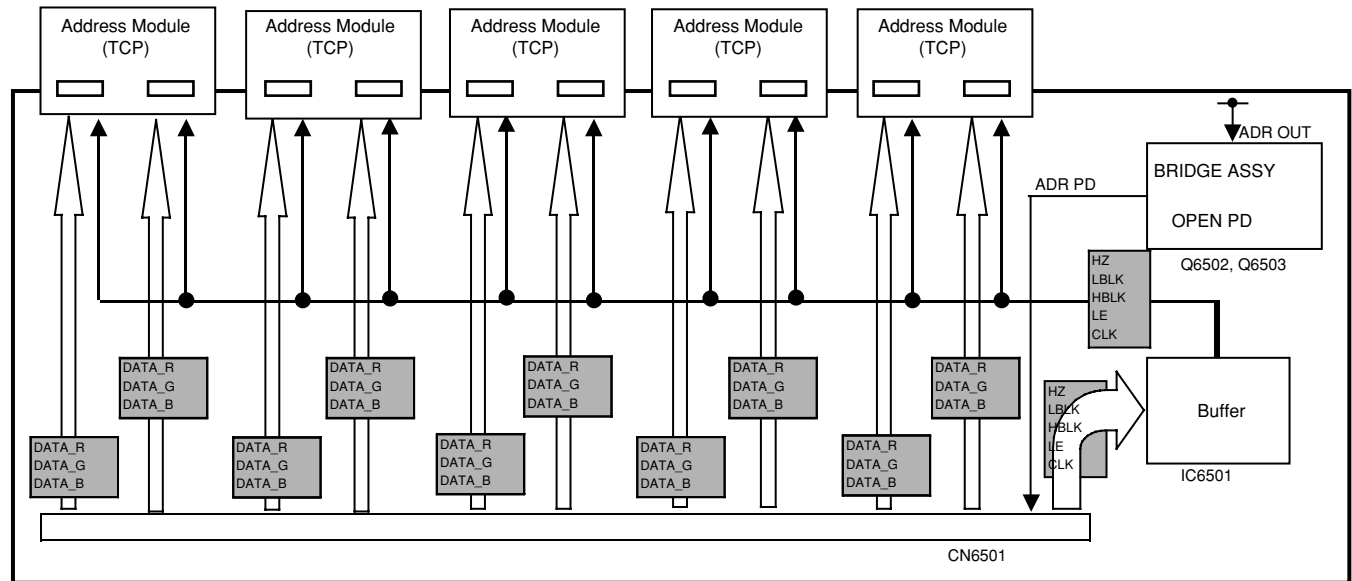
3.1.7 SUB ADDRESS Aand B ASSYS



3.1.8 ADR RESONANCE ASSY

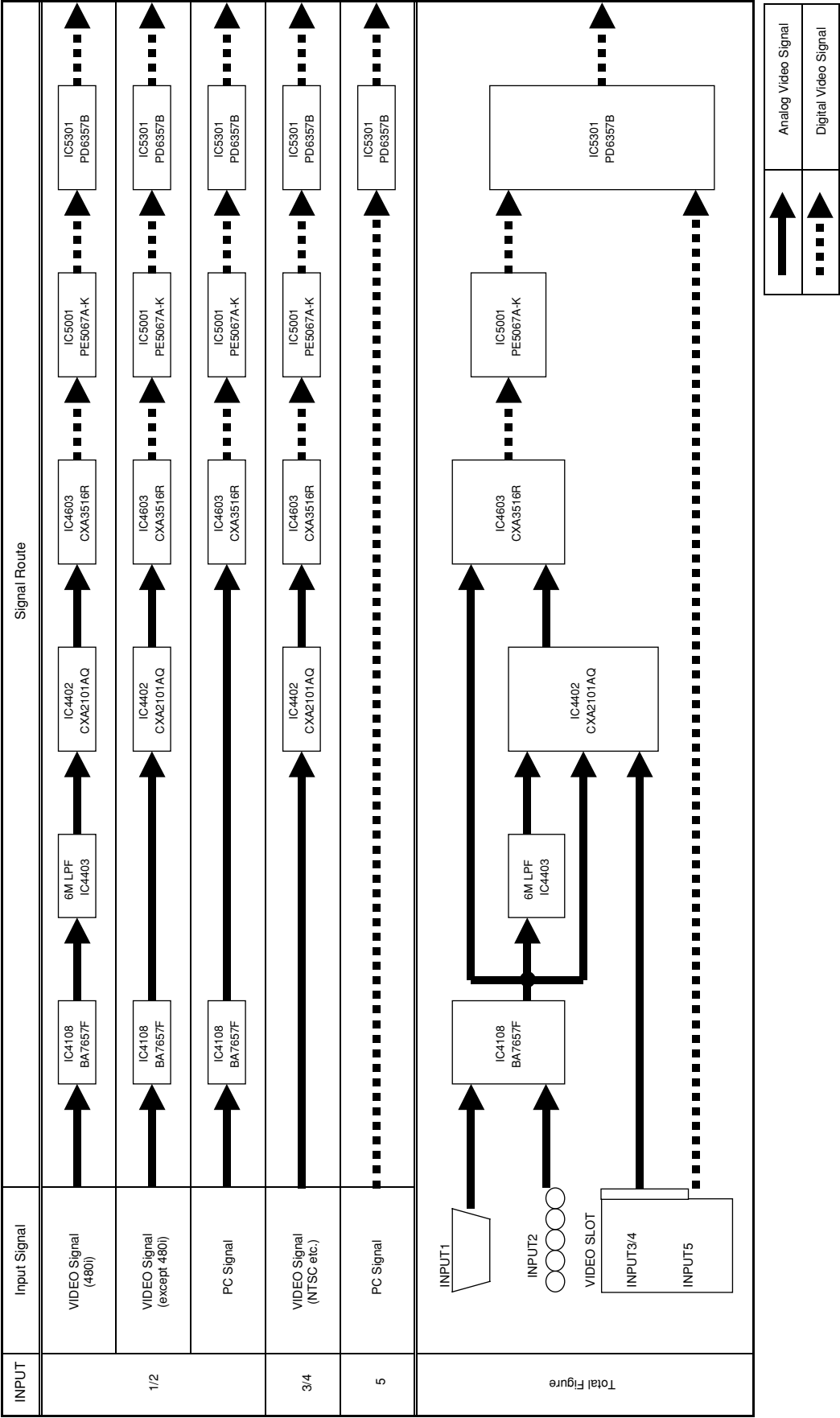


3.1.9 ADR CONNECT A,B,C and D ASSYS

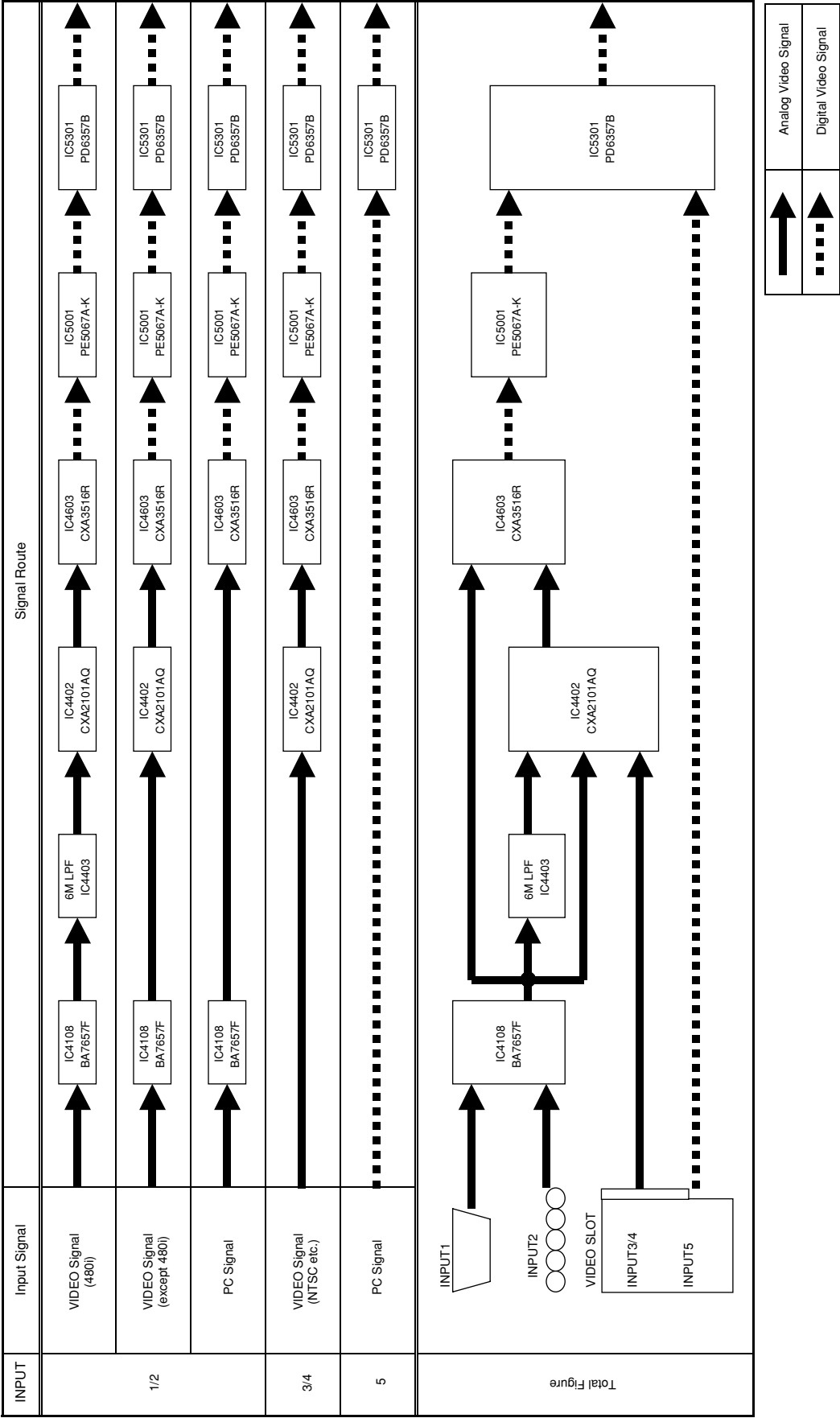


3.1.10 VIDEO SIGNAL ROUTE

A
B
C
D
E
F

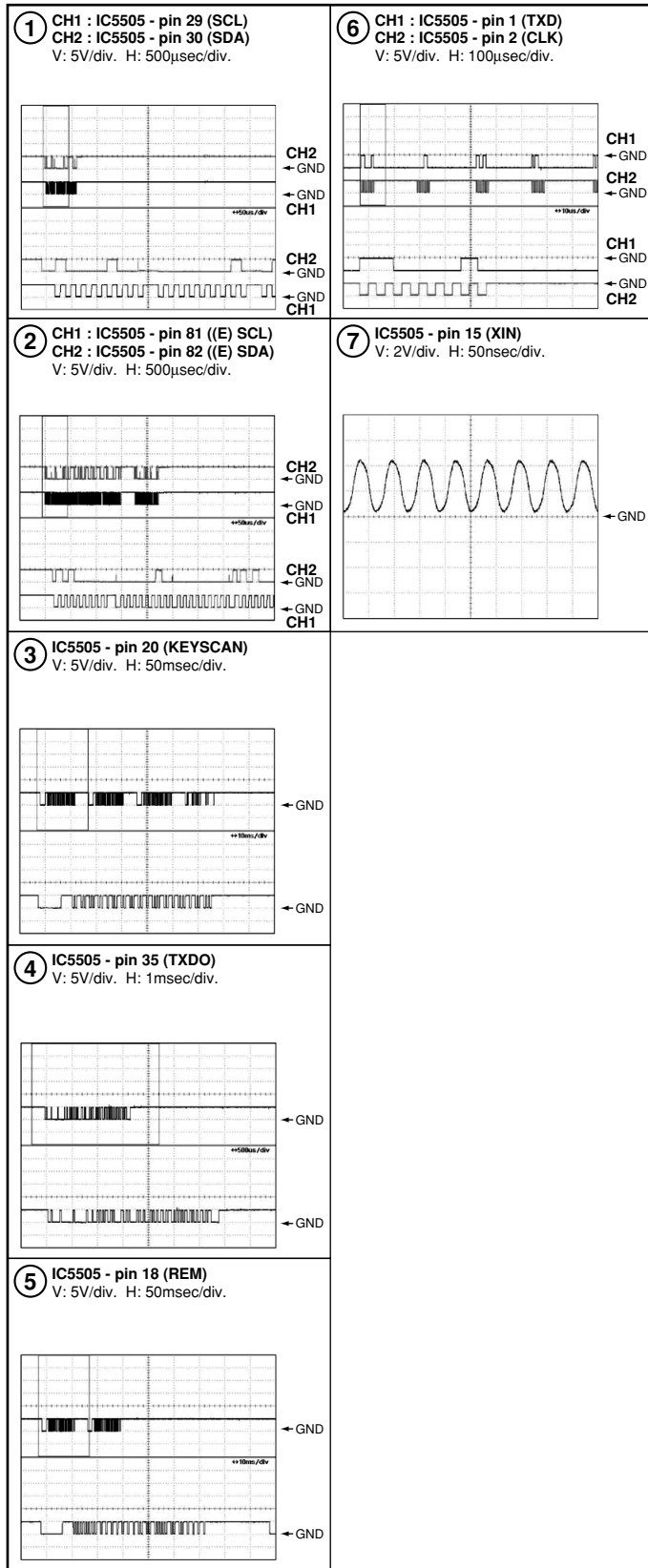


3.1.11 SYNC SIGNAL ROUTE

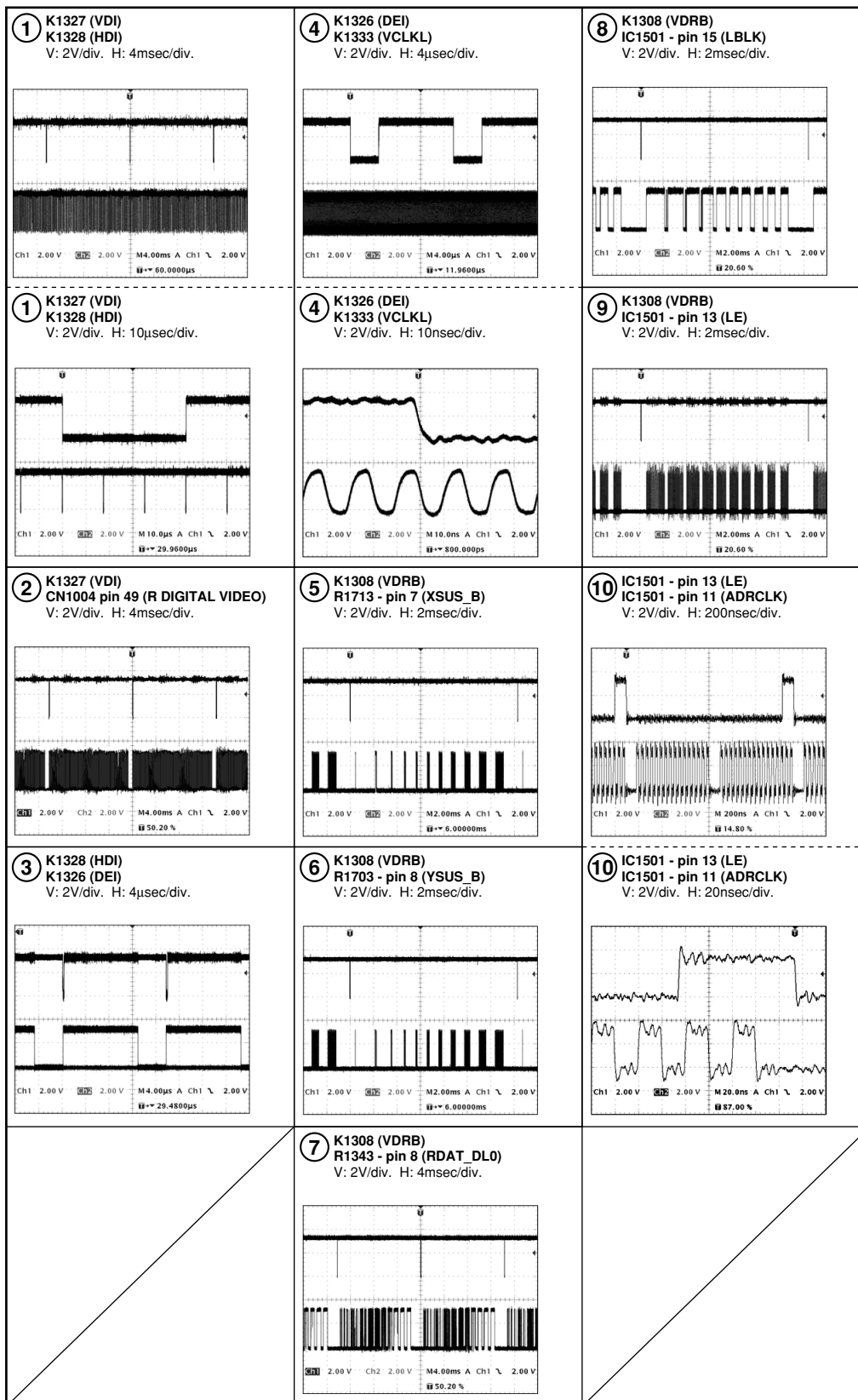


3.2 WAVEFORMS

RGB ASSY



DIGITAL VIDEO ASSY

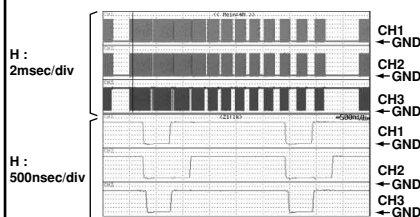


RESONANCE ASSY

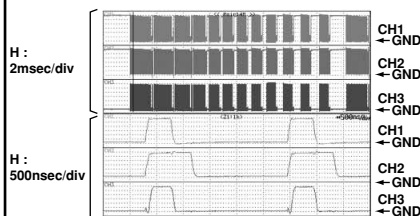
ADR CONNECT A - D ASSY

SUB ADDRESS A, B ASSY

- ① CH1 : IC6702 - pin 2
CH2 : IC6701 - pin 2
CH3 : IC6703 - pin 2
V: 1V/div.
(Input : VIDEO, Signal : Color bar)



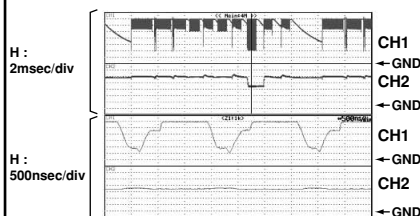
- ② CH1 : D6706 Cathode
CH2 : D6703 Cathode
CH3 : D6708 Cathode
V: 2V/div.
(Input : VIDEO, Signal : Color bar)



- ③ CH1 : Q6706 Drain
CH2 : Q6710 Soruse
V: 10V/div.
(Input : VIDEO, Signal : Color bar)



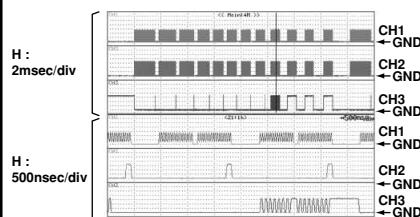
- ④ CH1 : Q6706 Drain
CH2 : Q6710 Soruse
V: 10V/div.
(Input : PC, Signal : Color bar)



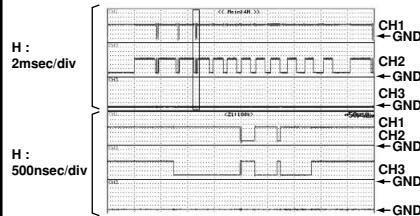
- ⑤ CH1 : Q6708 Drain
CH2 : Q6710 Drain
V: 10V/div.
(Input : VIDEO, Signal : Color bar)



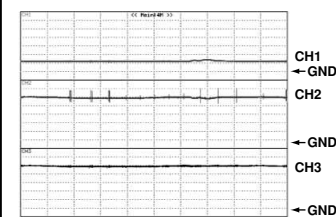
- ① CH1 : IC6501 - pin 8 (CLK)
CH2 : IC6501 - pin 6 (LE)
CH3 : IC6501 - (DATA)
V: 1V/div.
(Input : VIDEO, Signal : Color bar)



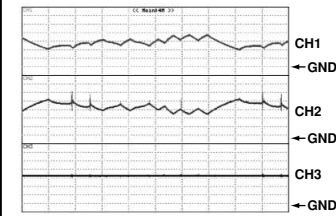
- ② CH1 : IC6501 - pin 5 (HBLK)
CH2 : IC6501 - pin 3 (LCLK)
CH3 : IC6501 - pin 2 (HZ)
V: 1V/div.
(Input : VIDEO, Signal : Color bar)



- ① CH1 : IC8801 - pin 3
CH2 : IC8801 - pin 7
CH3 : IC8802 - pin 1
V: 2V/div. H: 2msec/div.
(Input : VIDEO, Signal : Color bar)

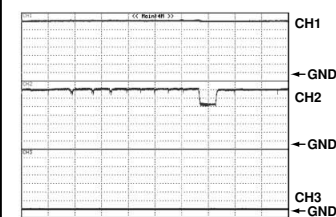


- ② CH1 : IC8801 - pin 3
CH2 : IC8801 - pin 7
CH3 : IC8802 - pin 1
V: 2V/div. H: 2msec/div.
(Input : VIDEO, Signal : Color bar)



V MID CLAMP ASSY

- ① CH1 : Q9006 Base (CLAMP REF V)
CH2 : D9010 Anode (MID)
CH3 : Q9006 Collector
V: 10V/div. H: 2msec/div.
(Input : VIDEO, Signal : Color bar)

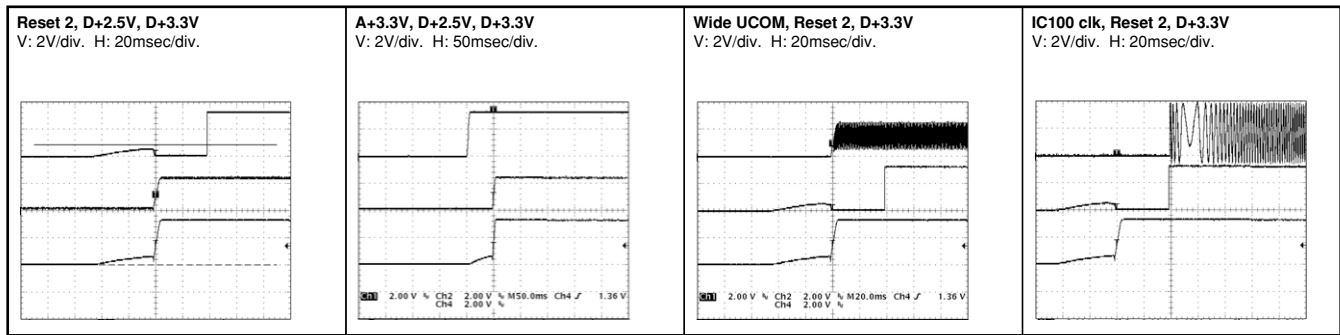


- ② CH1 : Q9006 Base (CLAMP REF V)
CH2 : D9010 Anode (MID)
CH3 : Q9006 Collector
V: 10V/div. H: 2msec/div.
(Input : PC, Signal : Color bar)

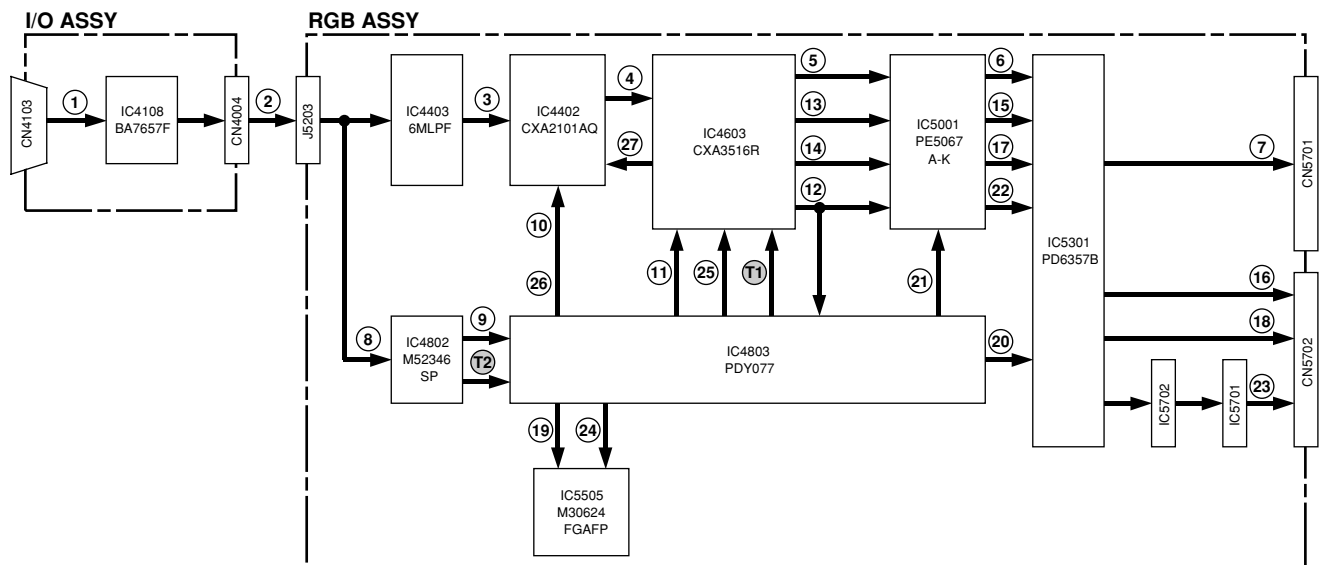


RGB VIDEO Signal Waveforms

Waveform at Power ON



Measurement Point



Trigger Signal

- Ⓘ K4805 (HD_PLL) : For Horizontal Sync. Signal
- Ⓣ IC4802 - pin 13 : For Vertical Sync. Signal

Measurement Condition

① to ②⑦ :

Input : INPUT 1 (Component)
Input Signal : 480i
Signal Pattern : H RAMP
Screen Mode : WIDE
Clamp Mode : AUTO
Color Mode : COLOR MODE 1

②⑧ to ②⑨ :

Input : INPUT 2 (RGBHV)
Input Signal : XGA@60Hz
Signal Pattern : Monoscope
Screen Mode : FULL
Clamp Mode : AUTO
Color Mode : COLOR MODE 1

③① to ③② :

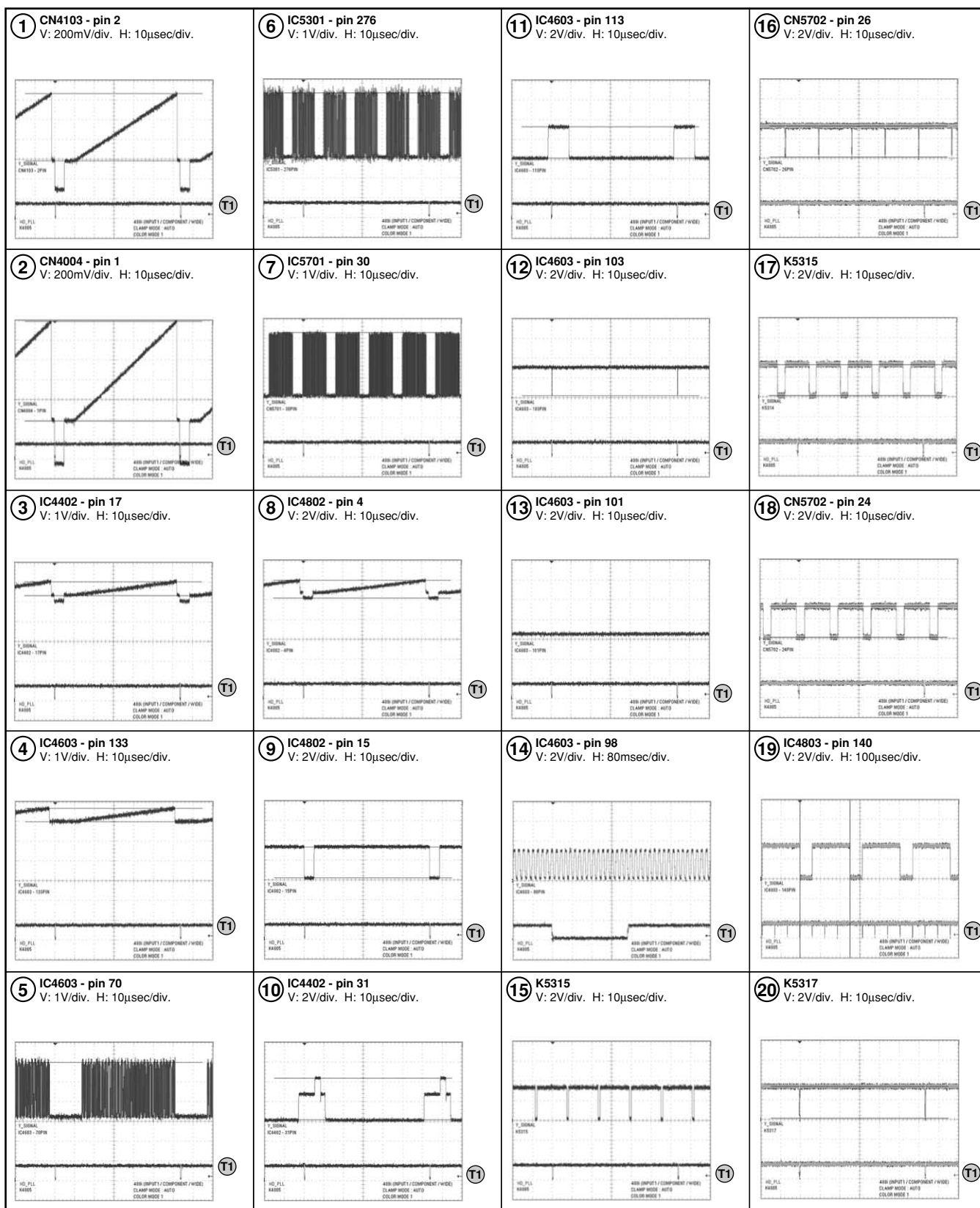
Input : INPUT 5 (DVI)
Input Signal : XGA@60Hz
Signal Pattern : Monoscope
Screen Mode : FULL
Clamp Mode : AUTO
Color Mode : COLOR MODE 1

③③ to ③④ :

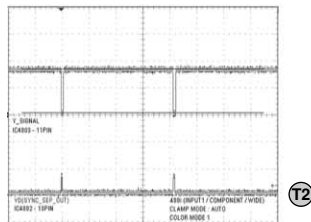
Input : INPUT 2 (RGBHV)
Input Signal : 1125i
Signal Pattern : Monoscope
Screen Mode : FULL
Clamp Mode : AUTO
Color Mode : COLOR MODE 1

● Information

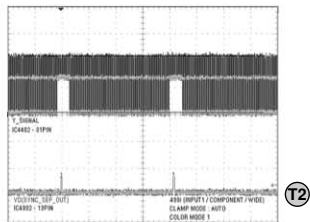
NO.	Point	Information	Trigger Signal (CH4)
1	CN4103 - pin 2	Synchronize with K4805 (HD_PLL)	T1
2	CN4004 - pin 1	Synchronize with K4805 (HD_PLL)	T1
3	IC4402 - pin 17	Synchronize with K4805 (HD_PLL)	T1
4	IC4603 - pin 133	Synchronize with K4805 (HD_PLL)	T1
5	IC4603 - pin 70	Synchronize with K4805 (HD_PLL)	T1
6	IC5301 - pin 276	Synchronize with K4805 (HD_PLL) and frequency is 4 times.	T1
7	IC5701 - pin 30	Do not synchronize with K4805 (HD_PLL)	T1
8	IC4802 - pin 4	Synchronize with K4805 (HD_PLL)	T1
9	IC4802 - pin 15	Synchronize with K4805 (HD_PLL)	T1
10	IC4402 - pin 31	Synchronize with K4805 (HD_PLL)	T1
11	IC4603 - pin 113	Synchronize with K4805 (HD_PLL)	T1
12	IC4603 - pin 103	Synchronize with K4805 (HD_PLL)	T1
13	IC4603 - pin 101	No output	T1
14	IC4603 - pin 98	Clock signal that synchronizes with K4805 (HD_PLL)	T1
15	K5315 (HD_SEL)	Synchronize with K4805 (HD_PLL) and frequency is 4 times.	T1
16	CN5702 - pin 26	Do not synchronize with K4805 (HD_PLL)	T1
17	K5314 (DE_SEL)	Synchronize with K4805 (HD_PLL) and frequency is 4 times.	T1
18	CN5702 - pin 24	Do not synchronize with K4805 (HD_PLL)	T1
19	IC4803 - pin 140	Synchronize with K4805 (HD_PLL) and frequency is 1/4 times.	T1
20	K5317 (HD_SEL)	Synchronize with K4805 (HD_PLL)	T1
21	IC4803 - pin 11	Synchronize with IC4802 - pin 13	T2
22	K5316 (VD_SEL)	Synchronize with IC4802 - pin 13	T2
23	CN5702 - pin 28	Synchronize with IC4802 - pin 13	T2
24	IC4803 - pin 139	Synchronize with IC4802 - pin 13	T2
25	K4806	Synchronize with IC4802 - pin 13	T2
26	IC4402 - pin 31	Synchronize with IC4802 - pin 13	T2
27	K4603 (Y_SIGNAL)	Synchronize with IC4802 - pin 13	T2
28	K5314 (DE_SEL)	K5314 (DE_SEL) is fixed to "L" level in the PC signal indication. K5315 (HD_SEL) and k 5317 (HD _ 30) synchronize with K5316 (VD_SEL).	K5316 (VD_SEL)
	K5315 (HD_SEL)		
	K5316 (VD_SEL)		
	K5317 (HD_30)		
29	K5314 (DE_SEL)	Magnified K5316 (VD_SEL) section of No. 28. K5315 (HD_SEL) and K5317 (HD _ 30) are the same frequency in the PC signal indication.	K5316 (VD_SEL)
	K5315 (HD_SEL)		
	K5316 (VD_SEL)		
	K5317 (HD_30)		
30	K5314 (DE_SEL)	K5314 (DE_SEL) is not fixed to "L" level in the PC signal indication by the DVI input. K5314 (DE_SEL), K5315 (HD_SEL) and k 5317 (HD_30) synchronize with K5316 (VD_SEL).	K5316 (VD_SEL)
	K5315 (HD_SEL)		
	K5316 (VD_SEL)		
	K5317 (HD_30)		
31	K5314 (DE_SEL)	Magnified K5316 (VD_SEL) section of No. 30. K5314 (DE_SEL), K5315 (HD_SEL) and K5317 (HD_30) are the same frequency in the PC signal indication by the DVI input.	K5316 (VD_SEL)
	K5315 (HD_SEL)		
	K5316 (VD_SEL)		
	K5317 (HD_30)		
32	K5314 (DE_SEL)	K5314 (DE_SEL) is not fixed to "L" level in the 1125i indication. K5314 (DE_SEL), K5315 (HD_SEL) and k 5317 (HD _ 30) synchronize with K5316 (VD_SEL).	K5316 (VD_SEL)
	K5315 (HD_SEL)		
	K5316 (VD_SEL)		
	K5317 (HD_30)		
33	K5314 (DE_SEL)	Magnified K5316 (VD_SEL) section of No. 32. Frequency of 2 times of K5314 (DE_SEL), K5315 (HD_SEL) and K5317 (HD_30) in the 1125i indication.	K5316 (VD_SEL)
	K5315 (HD_SEL)		
	K5316 (VD_SEL)		
	K5317 (HD_30)		



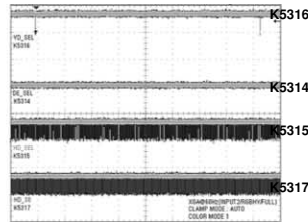
21 IC4803 - pin 11
V: 200mV/div. H: 4msec/div.



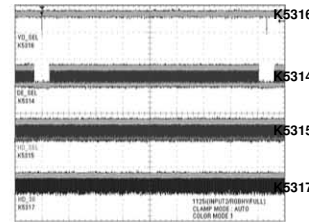
26 IC4402 - pin 31
V: 200mV/div. H: 4msec/div.



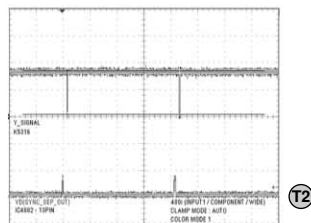
28 K5314 (DE_SEL), K5315 (HD_SEL),
K5316 (VD_SEL), K5317 (HD_30)
V: 5V/div. H: 2msec/div.



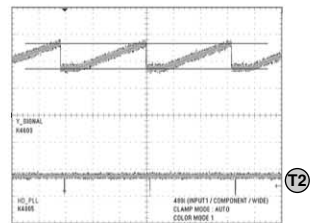
32 K5314 (DE_SEL), K5315 (HD_SEL),
K5316 (VD_SEL), K5317 (HD_30)
V: 5V/div. H: 2msec/div.



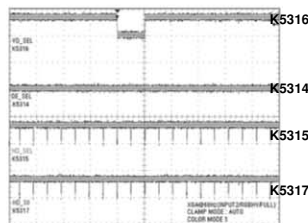
22 K5316
V: 200mV/div. H: 4msec/div.



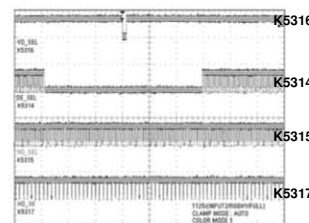
27 K4603 (Y_SIGNAL)
V: 1V/div. H: 20µsec/div.



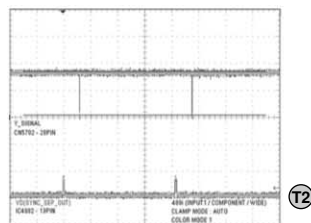
29 K5314 (DE_SEL), K5315 (HD_SEL),
K5316 (VD_SEL), K5317 (HD_30)
V: 5V/div. H: 40µsec/div.



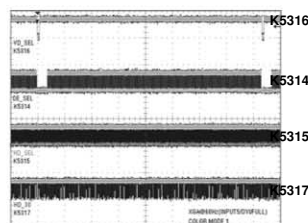
33 K5314 (DE_SEL), K5315 (HD_SEL),
K5316 (VD_SEL), K5317 (HD_30)
V: 5V/div. H: 200µsec/div.



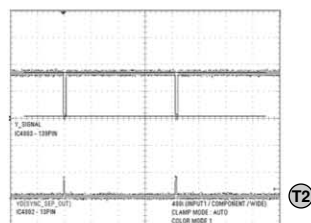
23 CN5702 - pin 28
V: 200mV/div. H: 4msec/div.



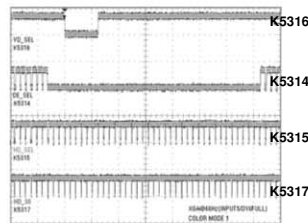
30 K5314 (DE_SEL), K5315 (HD_SEL),
K5316 (VD_SEL), K5317 (HD_30)
V: 5V/div. H: 2msec/div.



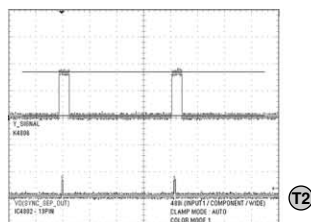
24 IC4803 - pin 139
V: 200mV/div. 4msec/div.



31 K5314 (DE_SEL), K5315 (HD_SEL),
K5316 (VD_SEL), K5317 (HD_30)
V: 5V/div. H: 100µsec/div.



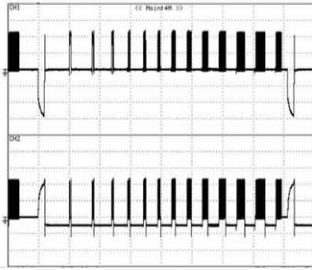
25 K4806
V: 200mV/div. H: 4msec/div.



Sustain Waveforms

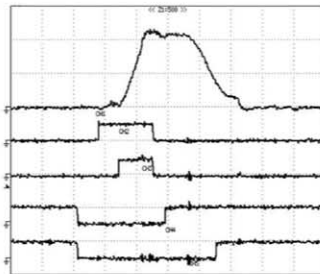
● Sustain Waveform (1 field)

ch 1 : K3107 (X.PSUS) - K3201 (SUSGND)
V: 100V/div. H: 2msec/div.
ch 2 : K2220 (Y.PSUS) - K2219 (SUSGND)
V: 100V/div. H: 2msec/div.



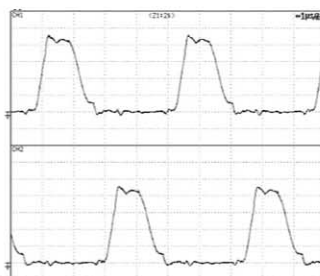
● Sustain Waveform

ch 1 : K2220 (Y.PSUS) - K2219 (SUSGND)
V: 100V/div. H: 500nsec/div.
ch 2 : K2028 (YSUS_U) - K2024 (DGND)
V: 10V/div. H: 500nsec/div.
ch 3 : K2027 (YSUS_B) - K2024 (DGND)
V: 10V/div. H: 500nsec/div.
ch 4 : K2029 (YSUS_D) - K2024 (DGND)
V: 10V/div. H: 500nsec/div.
ch 5 : K2037 (YSUS_G) - K2024 (DGND)
V: 10V/div. H: 500nsec/div.



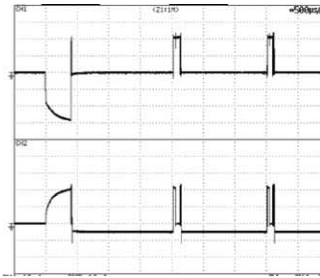
● Sustain Waveform (1 field)

ch 1 : K3107 (X.PSUS) - K3201 (SUSGND)
V: 50V/div. H: 1μsec/div.
ch 2 : K2220 (Y.PSUS) - K2219 (SUSGND)
V: 50V/div. H: 1μsec/div.



● Sustain Waveform (1 sub-field)

ch 1 : K3107 (X.PSUS) - K3201 (SUSGND)
V: 100V/div. H: 500μsec/div.
ch 2 : K2220 (Y.PSUS) - K2219 (SUSGND)
V: 100V/div. H: 500μsec/div.



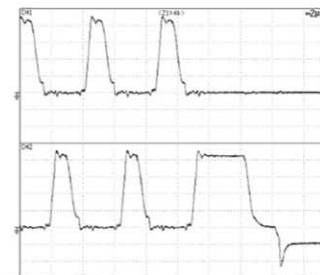
● Sustain Waveform (sustain)

ch 1 : K3107 (X.PSUS) - K3201 (SUSGND)
V: 50V/div. H: 5μsec/div.
ch 2 : K2220 (Y.PSUS) - K2219 (SUSGND)
V: 50V/div. H: 5μsec/div.



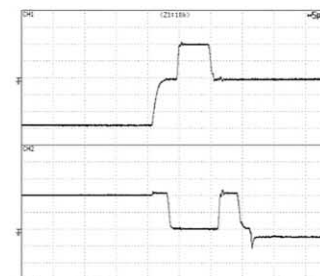
● Sustain Waveform (sustain)

ch 1 : K3107 (X.PSUS) - K3201 (SUSGND)
V: 50V/div. H: 2μsec/div.
ch 2 : K2220 (Y.PSUS) - K2219 (SUSGND)
V: 50V/div. H: 2μsec/div.



● Sustain Waveform (reset pulse)

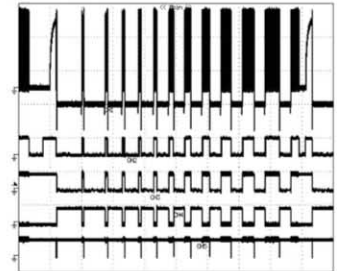
ch 1 : K3107 (X.PSUS) - K3201 (SUSGND)
V: 100V/div. H: 5μsec/div.
ch 2 : K2220 (Y.PSUS) - K2219 (SUSGND)
V: 100V/div. H: 5μsec/div.



Drive Pulse Waveforms

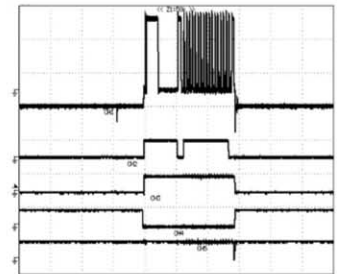
● Y Drive Pulse Control Waveform (1 field)

ch 1 : K2220 (Y.PSUS) - K2219 (SUSGND)
V: 100V/div. H: 2msec/div.
ch 2 : K2039 (YCP_MSK) - K2024 (DGND)
V: 10V/div. H: 2msec/div.
ch 3 : K2040 (YSUS_MSK) - K2024 (DGND)
V: 10V/div. H: 2msec/div.
ch 4 : K2041 (OFS) - K2024 (DGND)
V: 10V/div. H: 2msec/div.
ch 5 : K2053 (SOFT_D) - K2024 (DGND)
V: 10V/div. H: 2msec/div.



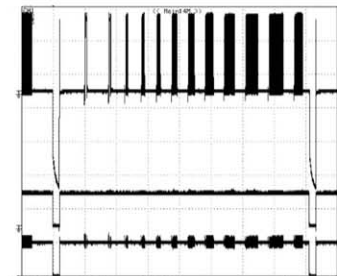
● Y Drive Pulse Control Waveform (1 sub-field)

ch 1 : K2220 (Y.PSUS) - K2219 (SUSGND)
V: 100V/div. H: 50μsec/div.
ch 2 : K2039 (YCP_MSK) - K2024 (DGND)
V: 10V/div. H: 50μsec/div.
ch 3 : K2040 (YSUS_MSK) - K2024 (DGND)
V: 10V/div. H: 50μsec/div.
ch 4 : K2041 (OFS) - K2024 (DGND)
V: 10V/div. H: 50μsec/div.
ch 5 : K2053 (SOFT_D) - K2024 (DGND)
V: 10V/div. H: 50μsec/div.



● X Drive Pulse Control Waveform (1 field)

ch 1 : K3107 (X.PSUS) - K3201 (SUSGND)
V: 100V/div. H: 2msec/div.
ch 2 : K3017 (XCP_MSK) - K3005 (DGND)
V: 10V/div. H: 2msec/div.
ch 3 : K3015 (XSUS_MSK) - K3005 (DGND)
V: 5V/div. H: 2msec/div.



5.PCB PARTS LIST

NOTES: ●Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.

●The Δ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.

●When ordering resistors, first convert resistance values into code form as shown in the following examples.

Ex.1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J=5%, and K=10%).

560 Ω \rightarrow 56 $\times 10^1$ \rightarrow 561 RD1/4PU $\overline{561}$ J

47k Ω \rightarrow 47 $\times 10^3$ \rightarrow 473 RD1/4PU $\overline{473}$ J

0.5 Ω \rightarrow R50 RN2H $\overline{R50}$ K

1 Ω \rightarrow 1R0 RS1P $\overline{1R0}$ K

Ex.2 When there are 3 effective digits (such as in high precision metal film resistors).

5.62k Ω \rightarrow 562 $\times 10^1$ \rightarrow 5621 RN1/4PC $\overline{5621}$ F

Mark No. Description Part No.

LIST OF ASSEMBLIES

NSP	1..SCAN FUKUGO ASSY	AWV1968
	2..SCAN (A) ASSY	AWZ6722
	2..SCAN (B) ASSY	AWZ6723
	2..X CONNECTOR (A) ASSY	AWZ6732
	2..X CONNECTOR (B) ASSY	AWZ6733
	2..BRIDGE A ASSY	AWZ6734
	2..BRIDGE B ASSY	AWZ6735
	2..BRIDGE C ASSY	AWZ6736
	2..BRIDGE D ASSY	AWZ6737
	2..CLAMP A ASSY	AWZ6738
	2..CLAMP B ASSY	AWZ6739
	2..CLAMP C ASSY	AWZ6740
	2..CLAMP D ASSY	AWZ6741

NSP	1..ADDRESS FUKUGO ASSY	AWV1900
NSP	2..ADR CONNECT A ASSY	AWZ6626
NSP	2..ADR CONNECT B ASSY	AWZ6627
NSP	2..ADR CONNECT C ASSY	AWZ6628
NSP	2..ADR CONNECT D ASSY	AWZ6629
	2..ADR RESONANCE ASSY	AWZ6750

	1..X DRIVE ASSY	AWV1984
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NSP	1..50 Y DRIVE ASSY	AWV1986
	2..Y DRIVE ASSY	AWZ6745
	2..SUB ADDRESS A ASSY	AWZ6689
	2..SUB ADDRESS B ASSY	AWZ6690
	2..SENSOR ASSY	AWZ6696
	2..SLOT CONNECTOR ASSY	AWZ6634

	1..DIGITAL VIDEO ASSY	AWV1979
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NSP	1..MX FUKUGO ASSY	AWV1976
	2..CONTROL ASSY	AWZ6633
	2..SIDE KEY ASSY	AWZ6637
	2..MX LED ASSY	AWZ6642
	2..IR ASSY	AWZ6643
	2..MX AUDIO ASSY	AWZ6644
	2..KEY CONNECTOR ASSY	AWZ6695
	2..SP OUT L ASSY	AWZ6705
	2..SP OUT R ASSY	AWZ6706

NSP	1..RGB VIDEO ASSY	AWV1978
	2..I/O ASSY	AWZ6631
	2..RGB ASSY	AWZ6744

Mark No. Description Part No.

SCAN (A) ASSY

SEMICONDUCTORS

IC6201-IC6206	SN755864APZP
D6207	KU10N16

CAPACITORS

C6201, C6202, C6212, C6213(0.1uF/250V)ACG1088	
C6222, C6223, C6232, C6233(0.1uF/250V)ACG1088	
C6242, C6243, C6252, C6253(0.1uF/250V)ACG1088	
C6203, C6259	CCSRCH151J50
C6206, C6210, C6215, C6219, C6227	CCSRCH181J50
C6229, C6236, C6240, C6244, C6246	CCSRCH181J50
C6255, C6260	CCSRCH181J50
C6208, C6209, C6217, C6218, C6226	CCSRCH331J50
C6230, C6238, C6239, C6245, C6250	CCSRCH331J50
C6257, C6258	CCSRCH331J50

C6204, C6205, C6207, C6214, C6216	CCSRCH390J50
C6220, C6224, C6225, C6231	CCSRCH390J50
C6234, C6235, C6237, C6248, C6249	CCSRCH390J50
C6251, C6254, C6256, C6262-C6266	CCSRCH390J50
C6211, C6221, C6228, C6241, C6247	CKSRYF104Z16

C6261	CKSRYF104Z16
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RESISTORS

R6207, R6209, R6222, R6228, R6232	RAB4C221J
R6239	RAB4C221J
Other Resistors	RS1/16S###J

OTHERS

CN6201 (15P COONNECTOR)	AKP1218
K6202, K6212, K6219, K6225, K6231 (TEST PIN)	AKX9002
K6239, K6244 (TEST PIN)	AKX9002

SCAN (B) ASSY

SEMICONDUCTORS

IC6001-IC6006	SN755864APZP
D6007	KU10N16

CAPACITORS

C6001, C6002, C6011, C6012(0.1uF/250V)ACG1088	
C6021, C6022, C6031, C6032(0.1uF/250V)ACG1088	
C6041, C6042, C6051, C6052(0.1uF/250V)ACG1088	
C6004, C6058	CCSRCH151J50
C6005, C6009, C6013, C6015	CCSRCH181J50

Mark No.	Description	Part No.
C6026, C6027, C6038, C6040, C6044 C6048, C6054, C6059 C6007, C6008, C6014, C6019, C6025 C6028, C6035, C6039, C6046, C6047 C6056, C6057		CCSRCH181J50 CCSRCH181J50 CCSRCH331J50 CCSRCH331J50 CCSRCH331J50
C6003, C6006, C6017, C6018, C6020 C6023, C6024, C6029, C6033, C6034 C6037, C6043, C6045, C6049, C6053 C6055, C6060, C6062-C6066 C6010, C6016, C6030, C6036, C6050		CCSRCH390J50 CCSRCH390J50 CCSRCH390J50 CCSRCH390J50 CKSRYF104Z16
C6061		CKSRYF104Z16

RESISTORS

R6007, R6012, R6021, R6028, R6032 R6040 Other Resistors	RAB4C221J RAB4C221J RS1/16S###J
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OTHERS

CN6001 (15P CONNECTOR) K6001, K6012, K6018, K6025, K6031 (TEST PIN) K6038, K6044 (TEST PIN)	AKP1218 AKX9002 AKX9002
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X CONNECTOR (A) ASSY

RESISTORS

All Resistors	RS1/16S###J
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X CONNECTOR (B) ASSY

RESISTORS

All Resistors	RS1/16S###J
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BRIDGE A ASSY

SEMICONDUCTORS

D6421	D1FL20U(S)
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CAPACITORS

C6421 (0.1uF/100V)	ACG1098
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OTHERS

CN6421 (4P PH CONNECTOR)	B4B-PH-SM3
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BRIDGE B ASSY

SEMICONDUCTORS

D6431	D1FL20U(S)
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CAPACITORS

C6431 (0.1uF/100V)	ACG1098
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OTHERS

CN6431 (4P PH CONNECTOR)	B4B-PH-SM3
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BRIDGE C ASSY

SEMICONDUCTORS

D6441	D1FL20U(S)
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CAPACITORS

C6441 (0.1uF/100V)	ACG1098
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OTHERS

CN6441 (4P PH CONNECTOR)	B4B-PH-SM3
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Mark No.	Description	Part No.
BRIDGE D ASSY		
<u>SEMICONDUCTORS</u>		
D6451		D1FL20U(S)

CAPACITORS

C6451 (0.1uF/100V)	ACG1098
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OTHERS

CN6451 (4P PH CONNECTOR)	B4B-PH-SM3
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CLAMP A ASSY

SEMICONDUCTORS

D6461	D1FL20U(S)
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CAPACITORS

C6461 (0.1uF/100V)	ACG1098
--------------------	---------

OTHERS

CN6461 (4P PH CONNECTOR)	B4B-PH-SM3
--------------------------	------------

CLAMP B ASSY

SEMICONDUCTORS

D6471	D1FL20U(S)
-------	------------

CAPACITORS

C6471 (0.1uF/100V)	ACG1098
--------------------	---------

OTHERS

CN6471 (4P PH CONNECTOR)	B4B-PH-SM3
--------------------------	------------

CLAMP C ASSY

SEMICONDUCTORS

D6481	D1FL20U(S)
-------	------------

CAPACITORS

C6481 (0.1uF/100V)	ACG1098
--------------------	---------

OTHERS

CN6481 (4P PH CONNECTOR)	B4B-PH-SM3
--------------------------	------------

CLAMP D ASSY

SEMICONDUCTORS

D6491	D1FL20U(S)
-------	------------

CAPACITORS

C6491 (0.1uF/100V)	ACG1098
--------------------	---------

OTHERS

CN6491 (4P PH CONNECTOR)	B4B-PH-SM3
--------------------------	------------

ADR CONECT A ASSY

SEMICONDUCTORS

IC6501 Q6502 Q6503 D6501	TC74VHC541FT 2SC2712 2SK209 DA227
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COILS AND FILTERS

L6501, L6502	ATH1081
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Mark No.	Description	Part No.
CAPACITORS		
	C6511-C6520 (330pF/100V)	ACG1105
	C6531, C6533, C6534 (47uF/6.3V)	ACH1341
	C6536-C6538	CCSRCH121J50
	C6506-C6510, C6521-C6525, C6532	CKSRYF104Z16
	C6535	CKSRYF104Z16

RESISTORS		
	R6518-R6522, R6524, R6526, R6528	RAB4C100J
	R6530, R6531, R6533-R6537, R6539	RAB4C100J
	R6541, R6543, R6545, R6547	RAB4C100J
	R6516	RAB4C473J
	Other Resistors	RS1/16S###J

OTHERS		
	CN6501 (55P CONNECTOR)	AKM1202

ADR CONECT B ASSY		
SEMICONDUCTORS		
	IC6601	TC74VHC541FT
	Q6602	2SC2712
	Q6603	2SK209
	D6601	DA227

COILS AND FILTERS		
	L6601, L6602	ATH1081

CAPACITORS		
	C6611-C6620 (330pF/100V)	ACG1105
	C6631, C6633, C6634 (47uF/6.3V)	ACH1341
	C6636-C6638	CCSRCH121J50
	C6606-C6610, C6621-C6625, C6632	CKSRYF104Z16
	C6635	CKSRYF104Z16

RESISTORS		
	R6618-R6622, R6624, R6626, R6628	RAB4C100J
	R6630, R6631, R6633-R6637, R6639	RAB4C100J
	R6641, R6643, R6645, R6647	RAB4C100J
	R6616	RAB4C473J
	Other Resistors	RS1/16S###J

OTHERS		
	CN6601 (55P CONNECTOR)	AKM1202

ADR CONNECT C ASSY		
SEMICONDUCTORS		
	IC6801	TC74VHC541FT
	Q6802	2SC2712
	Q6803	2SK209
	D6801	DA227

COILS AND FILTERS		
	L6801, L6802	ATH1081

CAPACITORS		
	C6811-C6820 (330pF/100V)	ACG1105
	C6831, C6833, C6834 (47uF/6.3V)	ACH1341
	C6836-C6838	CCSRCH121J50
	C6806-C6810, C6821-C6825, C6832	CKSRYF104Z16
	C6835	CKSRYF104Z16

RESISTORS		
	R6818-R6822, R6824, R6826, R6828	RAB4C100J
	R6830, R6831, R6833-R6837, R6839	RAB4C100J
	R6841, R6843, R6845, R6847	RAB4C100J
	R6816	RAB4C473J

Mark No.	Description	Part No.
	Other Resistors	RS1/16S###J
OTHERS		
	CN6801 (55P CONNECTOR)	AKM1202

ADR CONNECT D ASSY		
SEMICONDUCTORS		
	IC6901	TC74VHC541FT
	Q6902	2SC2712
	Q6903	2SK209
	D6901	DA227

COILS AND FILTERS		
	L6901, L6902	ATH1081

CAPACITORS		
	C6911-C6920 (330p/100V)	ACG1105
	C6931, C6933, C6934 (47/6.3V)	ACH1341
	C6936-C6938	CCSRCH121J50
	C6906-C6910, C6921-C6925, C6932	CKSRYF104Z16
	C6935	CKSRYF104Z16

RESISTORS		
	R6918-R6922, R6924, R6926, R6928	RAB4C100J
	R6930, R6931, R6933-R6937, R6939	RAB4C100J
	R6941, R6943, R6945, R6947	RAB4C100J
	R6916	RAB4C473J
	Other Resistors	RS1/16S###J

OTHERS		
	CN6901 (55P CONNECTOR)	AKM1202

ADR RESONANCE ASSY		
SEMICONDUCTORS		
	⚠ IC6704 (1A/50V)	ICP-S1.0
	IC6701-IC6703	TND301S
	Q6704, Q6705, Q6712	2SB1132
	Q6701-Q6703	2SD1664
	Q6710, Q6711	2SK3483-Z

	Q6706-Q6709	FX20ASJ-2
	D6701, D6703, D6704, D6706	1SS355
	D6709, D6710, D6717, D6718	D1FL20U(S)
	D6711-D6714	SPX-62S
	D6702, D6705, D6716	UDZ15B

COILS AND FILTERS		
	L6704	ATH1111

CAPACITORS		
	C6716 (2.0uF/250V)	ACE1162
	C6720, C6721 (0.01uF/100V)	ACG1101
	C6722 (0.0068F/100V)	ACG1102
	C6703-C6708 (56uF/80V)	ACH1347
	C6709	CEHV101M16

	C6701, C6702	CEHV470M16
	C6710, C6711, C6713	CKSRYF104Z16

RESISTORS		
	Other Resistors	RS1/16S###J

OTHERS		
	CN6701 (23P CONNECTOR)	AKP1221
	CN6702 (4P CONNECTOR)	B4B-PH-SM3
	CN6703 (5P CONNECTOR)	B5B-PH-SM3

Mark No. Description**Part No.****I/O ASSY****[I/O BLOCK]****SEMICONDUCTORS**

IC4003
IC4002
IC4004
IC4005, IC4006
IC4001

PQ05DZ11
PQ09DZ11
PQ12DZ11
PQ3DZ13
TA79L05F

CAPACITORS

C4027
C4012, C4020, C4024
C4008
C4001, C4004, C4005, C4009, C4013
C4016, C4017

CEHAT100M50
CEHAT101M10
CEHAT101M16
CEHAT470M16
CEHAT470M16

C4002, C4003, C4006, C4007
C4010, C4011, C4014, C4015
C4018, C4019, C4022, C4023
C4026

CKSRYF104Z16
CKSRYF104Z16
CKSRYF104Z16
CKSRYF105Z10

RESISTORS

R4001, R4003, R4004, R4007
R4002

RS1MMF1R0J
RS1MMF8R2J

OTHERS

CN4002

KM200NA15

[RGB I/O BLOCK]**SEMICONDUCTORS**

IC4110
IC4108
IC4107, IC4111
IC4104
IC4103, IC4105

24LCS21A
BA7657F
LT1399CS
TA7630P
TC4052BF

IC4109
IC4101, IC4102
Q4114
Q4102
Q4103, Q4117

TC74VHCT541AFT
UPC4570G2
2SC2412K
DTA143EK
DTC143EK

Q4104-Q4106, Q4108, Q4111, Q4112
Q4101, Q4113
Q4115, Q4116
D4111
D4105-D4107,

HN1B04FU
HN1C01FU
UMY1N
1SS184
D4114-D41161SS226

D4119,
D4121
D4110
D4108, D4109, D4112, D4113
D4122, D4123

D41201SS226
1SS352
RD6.8MB
UDZS5.6B
UDZS5.6B

SWITCHE

S4101

ASH1029

CAPACITORS

C4144, C4145, C4155, C4156
C4109, C4117
C4166
C4137, C4161, C4169
C4120, C4124, C4135, C4136

CCSRCH220J50
CCSRCH221J50
CEHAT100M50
CEHAT101M10
CEHAT470M16

C4139, C4140, C4143, C4150
C4153, C4154, C4157, C4174-C4176
C4167
C4101, C4104, C4106, C4110, C4111

CEHAT470M16
CEHAT470M16
CEHAT4R7M50
CKSQYB105K10

Mark No. Description**Part No.**

C4114, C4118, C4127, C4165

CKSQYB105K10

C4170, C4171
C4129, C4130, C4133, C4134, C4142
C4149, C4151, C4152, C4177-C4179
C4108, C4116
C4146

CKSQYB105K10
CKSRYB103K50
CKSRYB103K50
CKSRYB222K50
CKSRYB471K50

C4125, C4126
C4107, C4119, C4121-C4123, C4128
C4147, C4158-C4160, C4162-C4164
C4168, C4180-C4182

CKSRYB472K50
CKSRYF104Z16
CKSRYF104Z16
CKSRYF104Z16

RESISTORS

R4188-R4190
R4271-R4273
R4185, R4186, R4213, R4214
R4165, R4166, R4180, R4210-R4212
R4262, R4263

RS1/16S1001F
RS1/16S1101F
RS1/16S2201F
RS1/16S75R0F
RS1/2S750J

Other Resistors

RS1/16S###J

OTHERS

CN4101, CN4102 (MINI JACK)
CN4103, CN4104 (D-SUB SOCKET)
CN4105 (BNC SOCKET)

AKN1069
AKP1214
AKX1055

MX AUDIO ASSY**[MX AUDIO BLOCK]****SEMICONDUCTORS**

IC8601
Q8602
Q8603, Q8605, Q8607
Q8606
Q8601

BA5417
2SA1037K
2SC2412K
DTC143EK
HN1B04FU

Q8604

RN1901

COILS AND FILTERS

L8602, L8603
L8601

ATH-059
ATH9003

CAPACITORS

C8602, C8617
C8606, C8607
C8610
C8605, C8613, C8614
C8609, C8615, C8622

CEAT101M16
CEAT101M25
CEAT221M16
CEAT470M35
CEAT471M25

C8611, C8618
C8612, C8619
C8616, C8621
C8625
C8623, C8624

CEAT4R7M50
CKSQYF105Z16
CKSRYB103K50
CKSRYB222K50
CKSRYB473K50

C8601, C8608

CKSRYF103Z50

RESISTORS

R8633, R8634
R8625, R8632
R8624, R8631
Other Resistors

RD1/2MMF100J
RD1/2MMF152J
RD1/4MUF100J
RS1/16S###J

OTHERS

8551 (REMOTE RECEIVER)
8602 (SCREW)

GP1UM26RK
PMZ30P080FMC

Mark No. Description Part No.

**[FAN DRIVE BLOCK]
SEMICONDUCTORS**

IC8703 74VHCT00AMTC
IC8702 M5223AFP
IC8701 PQ20WZ11
Q8702 2SC2712
Q8701 HN1A01FU

CAPACITORS

C8703 CEAT100M50
C8704, C8707, C8711 CEAT101M16
C8708, C8709, C8712 CEAT470M35
C8706, C8710 CKSRYF104Z16
C8705 CKSRYF105Z10

RESISTORS

R8715-R8717, R8720 RS1/16S1001F
R8703 RS1/16S3001F
R8707 RS1/16S5101F
R8712 RS1/16S8200F
R8710 RS3LMF2R7J

Other Resistors RS1/16S###J

OTHERS

CN8704, CN8705 (3P CONNECTOR) CN8705B3B-ZR-3.4
CN8703 (PH CONNECTOR) B6B-PH-SM3

RGB ASSY

**[MATRIX BLOCK]
SEMICONDUCTORS**

IC4402 CXA2101AQ
IC4403 ML6426CS-1
IC4404 NJM072BM-E
Q4407-Q4409 2SA1037K
Q4413 2SC2412K

Q4412 HN1A01FU
Q4404 HN1B04FU
Q4410 HN1C01FU
D4401 1SS226

CAPACITORS

C4406, C4412, C4458 CEHAT100M50
C4405 CEHAT101M16
C4456 CEHAT470M16
C4437, C4451-C4453 CKSQYB105K10
C4407, C4409, C4410, C4428, C4429 CKSQYB474K16

C4431, C4432, C4434-C4436, C4445 CKSQYB474K16
C4448 CKSQYB474K16
C4421-C4423, C4426 CKSRYB104K16
C4408 CKSRYB222K50
C4411, C4414-C4418, C4420, C4424 CKSRYF104Z16

C4427, C4430, C4433, C4438-C4444 CKSRYF104Z16
C4446, C4447, C4449, C4450, C4455 CKSRYF104Z16
C4457 CKSRYF104Z16

RESISTORS

R4422, R4425, R4426 RAB4C103J
R4483 RS1/16S1003F
R4476 RS1/16S1004F
R4448 RS1/16S2202F
R4437 RS1/16S2204F

Mark No. Description Part No.

R4494 RS1/16S3901F
R4482 RS1/16S4701F
R4455 RS1/16S4702F
R4489 RS1/16S5601F
Other Resistors RS1/16S###J

**[AD/PLL/AMP BLOCK]
SEMICONDUCTORS**

IC4603 CXA3516AR
IC4605 NJM072BM-E
IC4604 TC74HC4066AF
IC4601 TC74LCX125FT
IC4602 TC7WH04FU

Q4601, Q4602 2SC2412K
Q4608 2SK208
Q4607 DTC124EK
Q4604-Q4606 HN1B04FU
Q4603 HN1C01FU

D4601-D4605 1SS355

CAPACITORS

C4623 CCSRCH101J50
C4615, C4680 CCSRCH220J50
C4626, C4669 CCSRCH221J50
C4620 CCSRCH331J50
C4604, C4607, C4614, C4638 CEHAT101M10

C4651, C4652, C4656, C4668 CEHAT101M10
C4622 CFTLA105J50
C4662 CKSRYB102K50
C4608, C4619, C4627, C4628 CKSRYB104K16
C4634, C4635, C4639, C4640 CKSRYB104K16

C4610, C4647 CKSRYB105K6R3
C4675 CKSRYB184K10
C4601, C4605, C4606, C4609 CKSRYF104Z16
C4611-C4613, C4616-C4618 CKSRYF104Z16
C4624, C4625, C4629-C4633 CKSRYF104Z16

C4636, C4637, C4641-C4646 CKSRYF104Z16
C4648-C4650, C4653-C4655 CKSRYF104Z16
C4657-C4661, C4663, C4677-C4679 CKSRYF104Z16

RESISTORS

R4612, R4623, R4625, R4629, R4632 RAB4C101J
R4636, R4639, R4641, R4643, R4647 RAB4C101J
R4653, R4657 RAB4C101J
R4635 RN1/16SE3001D
R4630 RS1/16S2201F

R4676, R4715 RS1/16S2204F
R4626 RS1/16S2701F
R4631 RS1/16S3301F
VR4701 (4.7k) ACP1091
Other Resistors RS1/16S###J

**[SYNC CONTROL BLOCK]
SEMICONDUCTORS**

IC4802 M52346SP
IC4801 NJM2234M
IC4803 PDY077E
Q4806 2SC2412K
Q4808, Q4809 DTC124EK

Q4803 HN1A01FU
Q4807 HN1B04FU

<u>Mark No.</u>	<u>Description</u>	<u>Part No.</u>
Q4802		HN1C01FU
D4807, D4808		1SS184
D4801, D4802		1SS226
<u>COILS AND FILTERS</u>		
F4801, F4802		ATF1194
<u>CAPACITORS</u>		
C4863, C4864		CCSRCH151J50
C4801, C4805		CCSRCH220J50
C4821, C4833		CCSRCH221J50
C4804		CCSRCH470J50
C4807, C4810, C4823		CEHAT100M50
C4812, C4844		CEHAT101M10
C4803, C4806, C4815		CEHAT470M16
C4817, C4822		CEHAT4R7M50
C4816		CKSQYB105K10
C4829		CKSRYB472K50
C4802, C4808, C4811, C4813, C4814		CKSRYF104Z16
C4819, C4820, C4830, C4831, C4836		CKSRYF104Z16
C4839, C4842, C4843, C4850, C4861		CKSRYF104Z16
C4860		CKSRYF105Z10
<u>RESISTORS</u>		
R4814, R4818, R4835, R4915		RAB4C101J
R4913		RAB4C102J
R4809		RAB4C152J
R4825		RAB4C471J
R4808, R4943		RAB4C472J
R4864		RS1/16S1802F
R4865		RS1/16S2702F
R4868		RS1/16S4702F
Other Resistors		RS1/16S###J

OTHERS

K4801, K4802, K4805, K4806 (TEST PIN)	AKX9002
K4809, K4810 (TEST PIN)	AKX9002
CN4801 (8P PLUG)	CKS3130

[IP BLOCK]

SEMICONDUCTORS

IC5101, IC5103	MS82V16520-8GA
IC5102	PE5066A
IC5001	PE5067A

CAPACITORS

C5017, C5121	CCSRCH220J50
C5006	CEHAT101M10
C5015, C5016	CEHAT221M6R3
C5001-C5005, C5007-C5013	CKSRYF104Z16
C5101-C5120	CKSRYF104Z16

RESISTORS

Other Resistors	RS1/16S###J
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OTHERS

5002	ANH1574
5001	ANH1576

<u>Mark No.</u>	<u>Description</u>	<u>Part No.</u>
<u>[DIGITAL SELECT BLOCK]</u>		
<u>SEMICONDUCTORS</u>		
IC5201-IC5207		TC74LCX541FT
<u>CAPACITORS</u>		
C5201-C5207		CKSRYF104Z16
<u>RESISTORS</u>		
R5213		RAB4C103J
R5201-R5212, R5215, R5217		RAB4C470J
Other Resistors		RS1/16S###J
<u>OTHERS</u>		
J5203 (10P HOUSING WIRE)		ADX2706
J5204 (11P HOUSING WIRE)		ADX2781
CN5201 (12P PLUG)		AKM1203
<u>[IC 30 BLOCK]</u>		
<u>SEMICONDUCTORS</u>		
IC5302, IC5303		MS82V16520-8GA
IC5301		PD6357B
<u>CAPACITORS</u>		
C5301, C5308		CEHAT101M10
C5302-C5307, C5309-C5322, C5324		CKSRYF104Z16
<u>RESISTORS</u>		
Other Resistors		RS1/16S###J
<u>OTHERS</u>		
K5314-K5317 (TEST PIN)		AKX9002
X5301 (100.00MHz)		ASS1161

[MAIN UCOM BLOCK]

SEMICONDUCTORS

IC5502	24LC64(I)SN
IC5504, IC5509	74VHCT00AMTC
IC5512	LM50CIM3
IC5511	M5223AFP
IC5510	PST9246N
IC5503	TC74VHC541FT
IC5501	TC74VHCT541AFT
IC5506, IC5507	TC7W126FU
Q5501	2SJ461
Q5502, Q5503	DTA143EK
Q5504	HN1A01FU

CAPACITORS

C5512, C5513, C5521, C5534	CCSRCH220J50
C5526, C5527	CCSRCH7R0D50
C5545	CEHAT100M50
C5528, C5533	CEHAT470M16
C5507, C5508, C5511, C5518, C5522	CKSRYB102K50
C5529-C5531, C5536, C5537	CKSRYB102K50
C5535, C5538, C5539	CKSRYB221K50
C5524	CKSRYB472K50
C5525	CKSRYF103Z50
C5502-C5505, C5509, C5514-C5517	CKSRYF104Z16
C5519, C5520, C5523, C5532	CKSRYF104Z16
C5542-C5544	CKSRYF105Z10

Mark No. **Description** **Part No.**

RESISTORS

R5503, R5509, R5510	RAB4C101J
R5535	RAB4C103J
R5504, R5526	RAB4C473J
R5569	RS1/16S1001F
R5571	RS1/16S1800F
R5566	RS1/16S3001F
R5563	RS1/16S5101F
Other Resistors	RS1/16S###J

OTHERS

CN5506 (30P PLUG)	AKM1204
K5501, K5502, K5508-K5510, K5512 (TEST PIN)	AKX9002
K5515, K5516, K5518A (TEST PIN)	KX9002
X5501 (16MHz)	ASS1159
CN5501, CN5502 (8P PLUG)	CKS3130

[WIDE UCOM BLOCK] SEMICONDUCTORS

IC5601	HD64F2328VF
IC5602	MBM29LV400TC-90PFTN
IC5604	NC7SZ08P5
IC5603	PST9228N
IC5605	TC7SH32FU
IC5607, IC5608	TC7WH74FU

CAPACITORS

C5601	CCSRCH102J50
C5615, C5616	CCSRCH7R0D50
C5611	CKSRYB472K50
C5612	CKSRYF103Z50
C5604, C5606, C5608, C5610, C5613	CKSRYF104Z16
C5617-C5619	CKSRYF104Z16

RESISTORS

R5603, R5604	RAB4C103J
Other Resistors	RS1/16S###J

OTHERS

X5601 (25MHz)	ASS1160
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[DIGITAL I/F BLOCK] SEMICONDUCTORS

IC5701	TC7WH123FU
IC5702	TC7WH74FU
D5701	1SS352

CAPACITORS

C5703	CCSRCH471J50
C5701, C5702	CKSRYF104Z16

RESISTORS

R5701-R5707, R5709,	
R5721	RAB4C101J
R5730	RS1/16S1003F
Other Resistors	RS1/16S###J

OTHERS

CN5701, CN5702 (50P CONNECTOR)	AKM1201
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Mark No. **Description** **Part No.**

CONTROL ASSY

SEMICONDUCTORS

IC8001	DS14C232CM
IC8002	TC74HC00AF
Q8002	2SC2712
Q8001	HN1A01FU
Q8003	RN1901
D8009, D8010	1SS355
D8001-D8008	UDZ15B

COILS AND FILTERS

L8001	LCTA221J3225
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CAPACITORS

C8001, C8002, C8005, C8006	CEAT1R0M50
C8003, C8010	CEAT470M16
C8004, C8007, C8008	CKSRYB103K50
C8009	CKSRYB472K50

RESISTORS

R8006	RAB4C102J
Other Resistors	RS1/16S###J

OTHERS

CN8001, CN8002 (MINI JACK9	AKN1070
CN8003 (9P D-SUB SOCKET)	AKP1213
CN8004, CN8005 (6P MINI DIN SOCKET)	AKP1215
CN8007 (PH CONNECTOR)	B6B-PH-SM3

SIDE KEY ASSY

SWITCHES

S8251-S8261	ASG1088
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OTHERS

CN8251 (8P FFC CONNECTOR)	AKM1207
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MX LED ASSY

SEMICONDUCTORS

D8501	AEL1170
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OTHERS

CN8501 (PH CONNECTOR)	S3B-PH-SM3
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IR ASSY

SEMICONDUCTORS

Q8551	2SC2712
D8552	1SS226
D8551	1SS355

CAPACITORS

C8551	CEV470M6R3
C8553	CKSQYB472K50
C8552	CKSRYB103K50
C8554	CKSRYF104Z16

RESISTORS

Other Resistors	RS1/16S###J
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KEY CONNECTOR ASSY

SEMICONDUCTORS

IC8301	PD5719A
Q8301	2SC2712

Mark No.	Description	Part No.
D8304-D8310		1SS226
D8301, D8303		1SS355
D8302		RD3.0MB

CAPACITORS

C8303	CEAT2R2M50
C8304	CKSRYB103K50
C8301, C8302, C8305	CKSRYB472K50

RESISTORS

R8315	RAB4C182J
Other Resistors	RS1/16S###J

OTHERS

CN8302 8P FFC CONNECTOR	AKM1207
X8301 3.84MHz	ASS1162
CN8301 PH CONNECTOR	B4B-PH-SM3

SP OUT L ASSY

SEMICONDUCTORS

IC8151	LM50CIM3
IC8152	M5223AFP
Q8151	HN1A01FU

COILS AND FILTERS

L8151, L8152	ATH1073
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CAPACITORS

C8163, C8164	CCSRCH101J50
C8154	CCSRSL221J50
C8162	CEAT470M16
C8159	CKSRYB103K50
C8151, C8153	CKSRYB332K50

C8155	CKSRYB472K50
C8157, C8161	CKSRYF104Z16
C8158, C8160	CKSRYF105Z10
C8152	CKSRYF473Z50

RESISTORS

R8153, R8154	RD1/2MMF100J
R8164	RS1/16S1001F
R8160	RS1/16S1800F
R8165	RS1/16S3001F
R8159	RS1/16S5101F

Other Resistors	RS1/16S###J
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OTHERS

CN8151 2P SPEAKER TERMINAL	AKE1059
CN8152 PH CONNECTOR	B6B-PH-SM3

SP OUT R ASSY

COILS AND FILTERS

L8176, L8177	ATH1073
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CAPACITORS

C8182, C8183	CCSRCH101J50
C8179	CCSRSL221J50
C8176, C8178	CKSRYB332K50
C8180	CKSRYB472K50
C8177	CKSRYF473Z50

RESISTORS

R8178, R8179	RD1/2MMF100J
Other Resistors	RS1/16S###J

Mark No.	Description	Part No.
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OTHERS

CN8176 2P SPEAKER TERMINAL	AKE1059
CN8177 PH CONNECTOR	B3B-PH-SM3

X DRIVE ASSY

[X LOGIC BLOCK]

SEMICONDUCTORS

IC3003	PE1012A
IC3004	TC74ACT540FT
IC3001, IC3008	TC74ACT541FT

COILS AND FILTERS

L3001	LFEA100J
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CAPACITORS

C3005	CEHAT470M16
C3001, C3003, C3004, C3006	CKSRYF104Z50

RESISTORS

R3009-R3012	RAB4C0R0J
R3001, R3003, R3026, R3029	RAB4C470J
R3002, R3005, R3030, R3033	RAB4C472J
Other Resistors	RS1/16S###J

OTHERS

K3001, K3003, K3004, K3008, K3010	AKX9002
TEST PIN	
K3012-K3015, K3017, K3018	AKX9002
TEST PIN	
CN3001 30P CONNECTOR	KF050HA30L

[X SUS BLOCK]

SEMICONDUCTORS

IC3102	HCPL-M611
IC3200, IC3201	STK795-470
IC3101	TC74ACT541FT
IC3103, C3104, IC3106, IC3107, IC3110	TND301S
IC3113	TND301S

IC3109	UPC78L05T
Q3116, Q3119, Q3120	2SJ522
Q3101	2SK2503
Q3103-Q3107, Q3109-Q3115	FS16VS-9
Q3124-Q3127	FS16VS-9

Q3122, Q3128	FS7VS-14A
Q3102	HN1B04FU
D3119	1SS184
D3108, D3124, D3125, D3133	1SS355
D3126, D3131, D3200, D3203, D3205	D1FL40

D3208, D3212-D3215	D1FL40
D3101, D3102, D3117, D3202, D3207	EC11FS4
D3210, D3211	EC11FS4
D3216, D3217	RB751V-40
D3120, D3127-D3129, D3135, D3136	UDZ15B

COILS AND FILTERS

L3206, L3207	ATH1112
L3201, L3204	ATH1117
L3202, L3205, L3210, L3211	ATH1118
L3101	LFEA100J
L3107, L3108	LFEA101J

CAPACITORS

C3205, C3206, C3212, C3213 (1.5uF)	ACE1160
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Mark No.	Description	Part No.
C3225, C3226 (1.5uF)		ACE1160
C3139, C3143 (0.1uF/630V)		ACG1092
C3223, C3224		ACG1104
C3200-C3202, C3207-C3209		ACH1352
C3132		ACH1353
C3112		CEHAT101M16
C3102, C3107, C3115, C3204, C3211		CEHAT101M25
C3101		CEHAT221M25
C3104, C3106		CEHAT470M16
C3135		CEHAT470M25
C3137, C3138		CKSRYB473K25
C3103, C3105, C3108, C3109, C3111		CKSRYF104Z50
C3113, C3114, C3117, C3130, C3140		CKSRYF104Z50

RESISTORS

R3183, R3184, R3187 (15)	ACN1156
R3113, R3114, R3121, R3122, R3126	RAB4C100J
R3132, R3140, R3141	RAB4C100J
R3212, R3217, R3230, R3234, R3237	RS1/10S184J
R3240, R3242, R3245	RS1/10S184J
R3211, R3213, R3214, R3218	RS1/16S2000F
R3134, R3163	RS1/2S100J
R3103	RS1/2S102J
R3109	RS1/2S2R2J
R3102	RS1/2S561J

R3215, R3216	RS1MMF101J
R3228, R3229	RS1MMF102J
R3178, R3179	RS3LMF121J
VR3200, VR3204	ACP1089
Other Resistors	RS1/16S###J

OTHERS

K3203, K3213 TEST PIN	AKX9002
KN3105-KN3114 GROUND PLATE	ANK-142
CN3101 13P PLUG	KM250MA13

[X DD CON BLOCK] SEMICONDUCTORS

IC3712	AN1431M
IC3701	MIP161
IC3702-IC3704	TLP181(GR)
Q3701	2SC2712
Q3800	HN1A01FU

D3710, D3711	1SS355
D3705, D3706	D1FL20U(S)
D3702	EC8FS6
D3708, D3709, D3713	RD110P
D3703	UDZ18B

D3707	UDZS5.6B
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COILS AND FILTERS

L3701	ATH1110
T3701	ATK1153

CAPACITORS

C3701	ACH1345
C3717	ACH1346
C3704	CEHAT101M16
C3706, C3711, C3714	CEHAT101M25
C3712	CEHAT331M16
C3705	CKSQYF104Z50
C3703, C3707, C3708, C3710	CKSRYB104K16
C3715, C3716	CKSRYB104K16

Mark No.	Description	Part No.
RESISTORS		
R3732		RS1/16S1001F
R3806		RS1/16S1802F
R3701-R3704, R3706-R3717		RS1/16S1803F
R3805		RS1/16S2702F
R3731		RS1/16S3900F
R3802		RS1/16S5601F
R3738, R3739		RS1/2S102J
R3800, R3801		RS1/2S823J
VR3701 (1k)		ACP1089
Other Resistors		RS1/16S###J

Y DRIVE ASSY

[Y DRIVE LOGIC BLOCK] SEMICONDUCTORS

IC2006	PE1013B
IC2007	TC74ACT540FT
IC2001, IC2003-IC2005	TC74ACT541FT
IC2101	TLP181(GR)
Q2101, Q2102	HN1C01FU

D2101	1SS355
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COILS AND FILTERS

L2001	LFEA100J
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CAPACITORS

C2101	CEHAT100M50
C2103	CEHAT1R0M50
C2003	CEHAT470M16
C2001, C2004, C2005, C2007, C2008	CKSRYF104Z50
C2010, C2102, C2104, C2122	CKSRYF104Z50

RESISTORS

R2015-R2018	RAB4C0R0J
R2001, R2002, R2005, R2011	RAB4C470J
R2037, R2038	RAB4C470J
R2035, R2036, R2039, R2040	RAB4C472J
Other Resistors	RS1/16S###J

OTHERS

CN2001 50P CONNECTOR	AKM1201
2101 SENSOR	AXX1057
2001 SCREW	BMZ20P040FMC
2002 NUT	NB20FMC

[Y DRIVE SUS BLOCK] SEMICONDUCTORS

IC2202, IC2208	HCPL-M611
IC2206, IC2214	STK795-470
IC2201	TC74ACT541FT
IC2203, IC2204, IC2210, IC2212, IC2213	TND301S
IC2216, IC2217	TND301S

IC2205, IC2209	UPC78L05T
Q2203	2SJ281
Q2204, Q2205	2SJ522
Q2201	2SK2503
Q2215-Q2221, Q2226-Q2228	FQB34N20

Q2232, Q2233	FQB34N20
Q2210, Q2211	FS16VS-9
Q2209	HN1B04FU
D2225	1SS184
D2202, D2204	1SS226

Mark No.	Description	Part No.
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D2211	1SS355
D2201	D1FL20U(S)
D2203, D2205, D2214, D2216, D2223	D1FL40
D2226, D2227, D2243	D1FL40
D2209	DF20L60
D2208, D2210, D2212, D2215	EC11FS4
D2221, D2222, D2228, D2239	EC11FS4
D2224, D2229	RB751V-40
D2206, D2207	UDZ15B

COILS AND FILTERS

L2207	ATH1110
L2213, L2214	ATH1112
L2206, L2211	ATH1117
L2208, L2212, L2215, L2216	ATH1118
L2210	LFEA100J
L2203, L2205	LFEA101J
L2201	LFEA470J

CAPACITORS

C2228, C2230, C2231, C2250-C2252 (1.5uF)	ACE1160
C2209, C2210 (0.1uF/630V)	ACG1092
C2233, C2248	ACG1104
C2211 (47uF/350V)	ACH1346
C2216, C2217, C2219, C2234-C2236	ACH1352
C2232	ACH1354
C2221, C2225	CEHAT101M16
C2204, C2227, C2237, C2240, C2247	CEHAT101M25
C2202	CEHAT221M25
C2218, C2224, C2229	CEHAT470M16
C2212, C2214	CEHAT470M25
C2201, C2203, C2205, C2208, C2213	CKSRYF104Z50
C2220, C2222, C2223, C2238, C2239	CKSRYF104Z50
C2241, C2242	CKSRYF104Z50

RESISTORS

R2235, R2273, R2291, R2305, R2315	RAB4C100J
R2317, R2342	RAB4C100J
R2253, R2256, R2270, R2283, R2332	RS1/10S184J
R2338, R2354, R2355	RS1/10S184J
R2359-R2362	RS1/16S2000F
R2263, R2264	RS1/2S100J
R2203	RS1/2S102J
R2209	RS1/2S2R2J
R2202	RS1/2S561J
R2278, R2303	RS1MMF101J
R2233, R2234	RS1MMF102J
R2274, R2275	RS1MMF221J
R2298, R2299	RS2MMF4R7J
R2276, R2281	RS3LMFR82J
VR2201, VR2205 (1k)	ACP1089

Other Resistors	RS1/16S###J
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OTHERS

K2206, K2218 TEST PIN	AKX9002
KN2201-KN2210 GROUND PLATE	ANK-142
CN2201 15P PLUG	KM250MA15

[Y DRIVE SCAN BLOCK]

SEMICONDUCTORS

IC2501, IC2502, IC2505, IC2510, IC2514	HCPL-M611
IC2504, IC2506	TC74ACT540FT

Mark No.	Description	Part No.
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COILS AND FILTERS

L2501-L2503	LFEA100J
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CAPACITORS

C2506, C2527	CEHAT220M2D
C2502	CEHAT221M16
C2524, C2525	CEHAT470M16
C2501, C2503, C2505, C2507, C2508	CKSRYF104Z50
C2513, C2517	CKSRYF104Z50

RESISTORS

R2502, R2504	RAB4C101J
Other Resistors	RS1/16S###J

OTHERS

CN2501, CN2502 15P CONNECTOR	AKM1200
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[Y DRIVE DD-CON BLOCK]

SEMICONDUCTORS

IC2715-IC2717	AN1431M
IC2709	HCNR201
IC2708, IC2710, IC2718	M5223AFP
IC2711	MIP0223SC
IC2701	MIP161
IC2704	MIP301
IC2702, IC2703, IC2705-IC2707	TLP181(GR)
IC2712-IC2714	TLP181(GR)
Q2701, Q2703	2SC2712
Q2704	HN1A01FU
D2712, D2717, D2718, D2732, D2734	1SS355
D2736, D2737	1SS355
D2704, D2706, D2707, D2715, D2726	D1FL20U(S)
D2728	D1FL20U(S)
D2711	D1FS4

D2702, D2714, D2727	EC11FS4
D2725	EC8FS6
D2733	RD91P
D2724	U1ZB330
D2713	U1ZB36

D2740	UDZ12B
D2709, D2716	UDZ3.6B
D2729, D2731	UDZ33B
D2703, D2710	UDZ36B
D2720, D2730, D2739	UDZS5.6B

COILS AND FILTERS

L2701	ATH1110
T2702	ATK1150
T2703	ATK1151
T2701	ATK1152

CAPACITORS

C2701, C2735 (22uF/315V)	ACH1345
C2706, C2725, C2737	CEHAT101M16
C2709, C2718, C2720, C2739, C2745	CEHAT101M25
C2708	CEHAT101M2A
C2740	CEHAT101M2C

C2704	CEHAT221M25
C2715	CEHAT331M16
C2746	CEHAT331M25
C2723, C2751	CEHAT470M16
C2712	CEHAT471M35

Mark No.	Description	Part No.
C2711		CKSRYB103K50
C2702, C2705, C2713, C2714, C2719		CKSRYB104K16
C2721, C2722, C2724, C2727, C2729		CKSRYB104K16
C2731, C2733, C2736, C2742, C2743		CKSRYB104K16
C2747-C2749		CKSRYB104K16
C2728, C2730		CKSRYB471K50
C2707, C2738		CKSRYF104Z50

RESISTORS

R2735, R2791	RS1/16S1000F
R2780	RS1/16S1103F
R2715, R2728, R2733	RS1/16S1201F
R2787	RS1/16S1302F
R2766	RS1/16S1501F

R2785	RS1/16S1503F
R2777, R2786	RS1/16S1802F
R2776	RS1/16S2702F
R2705, R2706, R2709, R2710, R2778	RS1/16S3002F
R2781	RS1/16S3002F

R2783	RS1/16S4701F
R2734, R2736	RS1/16S4702F
R2779	RS1/16S5102F
R2773	RS1/16S5601F
R2784	RS1/16S5602F

R2782	RS1/16S6801F
R2744-R2746, R2748-R2753	RS1/16S9102F
R2711, R2716, R2767, R2770	RS1/2S102J
R2788, R2792	RS1/2S561J
R2771, R2772	RS1/2S823J

R2712	RS3LMF272J
VR2702, VR2703 (1k)	ACP1089
VR2701 (2.2k)	ACP1090
Other Resistors	RS1/16S###J

OTHERS

2001 SCREW	PMB30P060FNI
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SLOT CONNECTOR ASSY

OTHERS

CN8102 (SOCKET 120P)	AKP1219
CN8101 (PCI SOCKET 120P)	AKP1220
KN8101, KN8102 (GROUND PLATE)	ANK1664

SUB ADDRESS A ASSY

SEMICONDUCTORS

IC8801, IC8802, IC8804	M5223AFP
IC8803	TC74VHC74FT
Q8802	2SA1163
Q8804, Q8805, Q8808	2SC2712
Q8806	2SK209

D8801-D8803, D8809	1SS355
D8806, D8807	DA227
D8808	UDZ27B
D8804	UDZS5.1B

COILS AND FILTERS

L8801	ATH1074
L8802, L8803	ATH1081

CAPACITORS

C8806	CCSRCH101J50
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Mark No.	Description	Part No.
C8822		CEHV100M16
C8804		CEHV100M35
C8808		CEHV470M16
C8807		CEVNP2R2M35
C8802, C8805, C8809-C8817		CKSRYF104Z16
C8820, C8821		CKSRYF104Z16

RESISTORS

R8806, R8807, R8837, R8838, R8841	RS1/16S1002D
R8858	RS1/16S1202D
R8864	RS1/16S1802F
R8828, R8829, R8846	RS1/16S2202D
R8826, R8827, R8839, R8840	RS1/16S4701D

R8833, R8859	RS1/16S4702F
R8832	RS1/16S5602F
R8801, R8802	RS1/2S1R5J
R8803-R8805	RS1/2S2R2J
Other Resistors	RS1/16S###J

OTHERS

CN8803 (23P CONNECTOR)	AKM1205
CN8801 (PH CONNECTOR)	S3B-PH-SM3
CN8802 (PH CONNECTOR)	S8B-PH-SM3

SUB ADDRESS B ASSY

SEMICONDUCTORS

IC8901, IC8902, IC8904	M5223AFP
IC8903	TC74VHC74FT
Q8902	2SA1163
Q8904, Q8905, Q8908	2SC2712
Q8906	2SK209

D8901-D8903, D8909	1SS355
D8906, D8907	DA227
D8908	UDZ27B
D8904	UDZS5.1B

COILS AND FILTERS

L8901	ATH1074
L8902, L8903	ATH1081

CAPACITORS

C8906	CCSRCH101J50
C8922	CEHV100M16
C8904	CEHV100M35
C8908	CEHV470M16
C8907	CEVNP2R2M35

C8902, C8905, C8909-C8917	CKSRYF104Z16
C8920, C8921	CKSRYF104Z16

RESISTORS

R8906, R8907, R8937, R8938, R8941	RS1/16S1002D
R8958	RS1/16S1202D
R8964	RS1/16S1802F
R8928, R8929, R8946	RS1/16S2202D
R8926, R8927, R8939, R8940	RS1/16S4701D

R8933, R8959	RS1/16S4702F
R8932	RS1/16S5602F
R8901, R8902	RS1/2S1R5J
R8903-R8905	RS1/2S2R2J
Other Resistors	RS1/16S###J

OTHERS

CN8903 23P CONNECTOR	AKM1205
CN8901 PH CONNECTOR	S3B-PH-SM3

Mark No.	Description	Part No.
CN8902	PH CONNECTOR	S8B-PH-SM3

THERMAL SENSOR ASSY

SEMICONDUCTORS

IC8351	LM50CIM3
IC8352	M5223AFP

CAPACITORS

C8356	CEV470M6R3
C8354	CKSRYB103K50
C8351, C8355	CKSRYF104Z16
C8352, C8353	CKSRYF105Z10

RESISTORS

R8354, R8358	RS1/16S1001F
Other Resistors	RS1/16S###J

DIGITAL VIDEO ASSY

[INTERFACE BLOCK]

SEMICONDUCTORS

IC1001-IC1008	TC74VHC541FT
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COILS AND FILTERS

F1001-F1006	ATF1194
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CAPACITORS

C1001-C1008	CKSRYF104Z16
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RESISTORS

R1044	RAB4C101J
R1001-R1007, R1036, R1063-R1069	RAB4C103J
R1008-R1017, R1019, R1020, R1027	RAB4C470J
R1032, R1034, R1035, R1037, R1038	RAB4C470J
R1040-R1043, R1048, R1049	RAB4C470J
R1051-R1054	RAB4C470J
Other Resistors	RS1/16S###J

OTHERS

CN1003, CN1004 50P CONNECTOR	AKM1201
K1001 TEST PIN	AKX9002
CN1001 PH CONNECTOR	B12B-PH-SM3

[PANEL UCOM BLOCK]

SEMICONDUCTORS

IC1101	HD64F2328VF
IC1103	NC7SZ08P5
IC1102	PST9228N
Q1101, Q1103	DTC143EK
D1101	AEL1171

CAPACITORS

C1123, C1124	CCSRCH7R0D50
C1101	CEV101M4
C1102, C1109, C1110, C1112-C1116	CKSRYB102K50
C1129-C1132	CKSRYB102K50
C1117, C1121	CKSRYB103K50

C1120	CKSRYB472K50
C1103-C1108, C1111, C1118, C1119	CKSRYF104Z16
C1122, C1125-C1128	CKSRYF104Z16

RESISTORS

Mark No.	Description	Part No.
R1104, R1107, R1110, R1113, R1114		RAB4C472J
R1116, R1121, R1124, R1127, R1129		RAB4C472J
Other Resistors		RS1/16S###J

OTHERS

K1101-K1104, K1107, K1108 TEST PIN	AKX9002
X1101 25MHz	ASS1160

[MODULE UCOM BLOCK]

SEMICONDUCTORS

IC1204	24LC04B(I)SN
IC1208	PST9246N
IC1202	TC74VHC08FT
IC1201	TC74VHC21FT
IC1205	TC74VHC541FT

IC1203	TC74VHCT541AFT
IC1206	TC7W126FU
D1201, D1202	1SS355

CAPACITORS

C1213, C1243-C1245	CCSRCH470J50
C1235, C1236	CCSRCH7R0D50
C1225, C1232	CEV470M6R3
C1201-C1203, C1206-C1211	CKSRYB102K50
C1214-C1216, C1218, C1219	CKSRYB102K50

C1223, C1224, C1226, C1227, C1229	CKSRYB102K50
C1237, C1238, C1241, C1242, C1247	CKSRYB102K50
C1234	CKSRYB103K50
C1233	CKSRYB472K50
C1204, C1205, C1212, C1217	CKSRYF104Z16

C1221, C1222, C1228, C1230, C1231	CKSRYF104Z16
C1239, C1240, C1246, C1248-C1250	CKSRYF104Z16

RESISTORS

R1209, R1214, R1245	RAB4C101J
R1242	RAB4C103J
R1207	RAB4C123J
R1213, R1216	RAB4C473J
Other Resistors	RS1/16S###J

OTHERS

X1201	ASS1159
CN1203	B3B-PH-SM3
CN1201, CN1202	CKS3130

[DIGITAL BLOCK]

SEMICONDUCTORS

IC1802	FS781BZB
IC1704	NC7SZ08P5
IC1301, IC1401	PD6358A
IC1703	PE5064A
IC1501, IC1502, IC1601, IC1602	TC74VCX541FT

IC1702, IC1801	TC74VHC541FT
IC1803	TC74VHC74FT
IC1701	TC74VHCT541AFT
D1301-D1305	1SS226

COILS AND FILTERS

F1301-F1304, F1501-F1505	ATF1194
F1601-F1605	ATF1194

CAPACITORS

C1807	CCSRCH271J50
-------	--------------

Mark No.	Description	Part No.
A	C1802	CEV100M16
	C1306, C1322, C1406, C1422, C1711	CEV101M4
	C1806	CEV101M4
	C1504-C1508, C1604-C1608, C1712	CKSRYB102K50
■	C1303-C1305, C1307-C1321	CKSRYF104Z16
	C1323-C1336, C1403-C1405	CKSRYF104Z16
	C1407-C1421, C1423-C1436, C1501	CKSRYF104Z16
	C1503, C1601, C1603, C1701-C1710	CKSRYF104Z16
	C1713, C1803-C1805	CKSRYF104Z16

RESISTORS

B	R1502, R1517, R1606, R1622	RAB4C101J
	R1307, R1310-R1315, R1317, R1318	RAB4C220J
	R1321, R1322, R1326-R1344, R1407	RAB4C220J
	R1410-R1415, R1417, R1418	RAB4C220J
	R1421, R1422, R1426-R1444	RAB4C220J
■	R1501, R1514, R1607, R1627, R1701	RAB4C470J
	R1703-R1709, R1712-R1717	RAB4C470J
	R1551, R1552	RS1/2S680J
	Other Resistors	RS1/16S###J

OTHERS

C	CN1701 50P CONNECTOR	AKM1201
	CN1501, CN1502, CN1504, CN1505 (55P CONNECTOR)	AKM1202
	CN1601, CN1602, CN1604, CN1605 (55P CONNECTOR)	AKM1202
	K1301, K1302, K1308, K1311-K1314 (TEST PIN)	AKX9002
	K1316, K1321, K1324, K1326-K1331 (TEST PIN)	AKX9002
■	K1333, K1501, K1502, K1601, K1602 (TEST PIN)	AKX9002
	K1728, K1729 (TEST PIN)	AKX9002
	X1801 (50.000MHz)	ASS1146
	CN1503, CN1603 (PH CONNECTOR)	B8B-PH-SM3
	CN1301 (8P PLUG)	CKS3130
D	CN1702 (30P CONNECTOR)	KF050HA30L

[D-D CONVERTER BLOCK]

SEMICONDUCTORS

■	Q1902, Q1905, Q1907	2SC2712
	Q1903	DTC143EK
	Q1901, Q1904, Q1906	HN1C01FU
	D1903-D1906, D1911, D1912	1SS355
	D1908	HZU2.2B
E	D1902, D1909	UDZ3.6B
	D1907	UDZS5.1B
	D1901	UDZS6.8B

CAPACITORS

■	C1904, C1906, C1912	CEV220M16
	C1901-C1903, C1905, C1907-C1911	CKSRYF104Z16

RESISTORS

■	R1935, R1936	RS1/2S680J
	Other Resistors	RS1/16S###J

OTHERS

F	K1901-K1906 (TEST PIN)	AKX9002
	1901 (DC-DC CONVERTER)	AXY1060
	CN1901 (PH CONNECTOR)	B13B-PH-SM

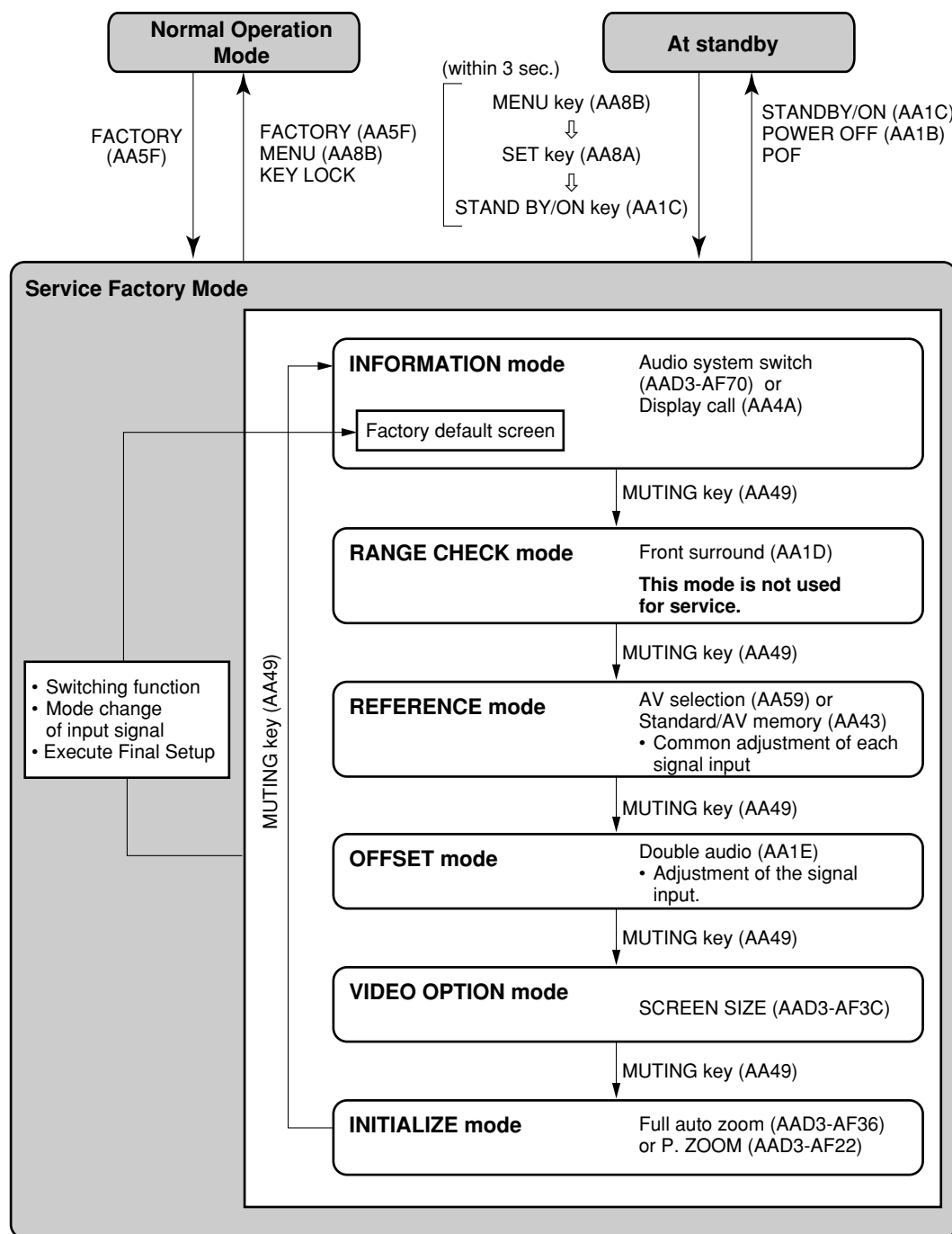
6. ADJUSTMENT

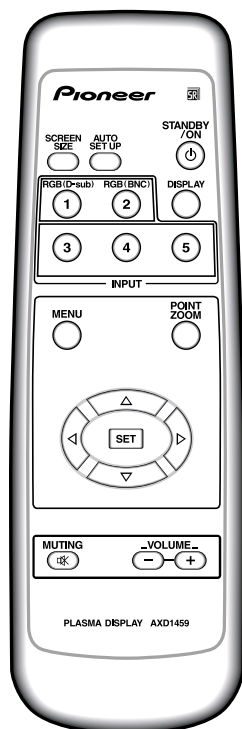


6.1 SERVICE FACTORY MODE

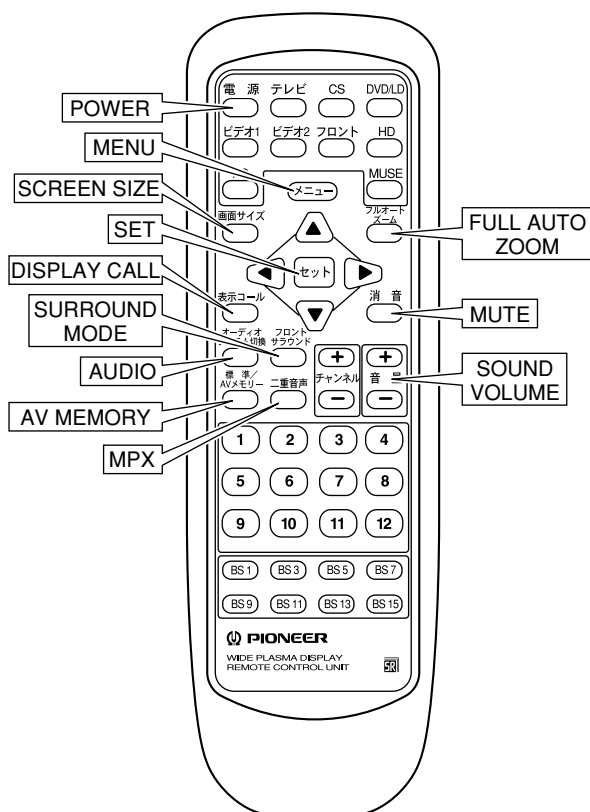
Commands in Service Factory mode must be issued using the remote control unit (AXD1459) supplied with the Plasma Display.

6.1.1 State Transition Diagram

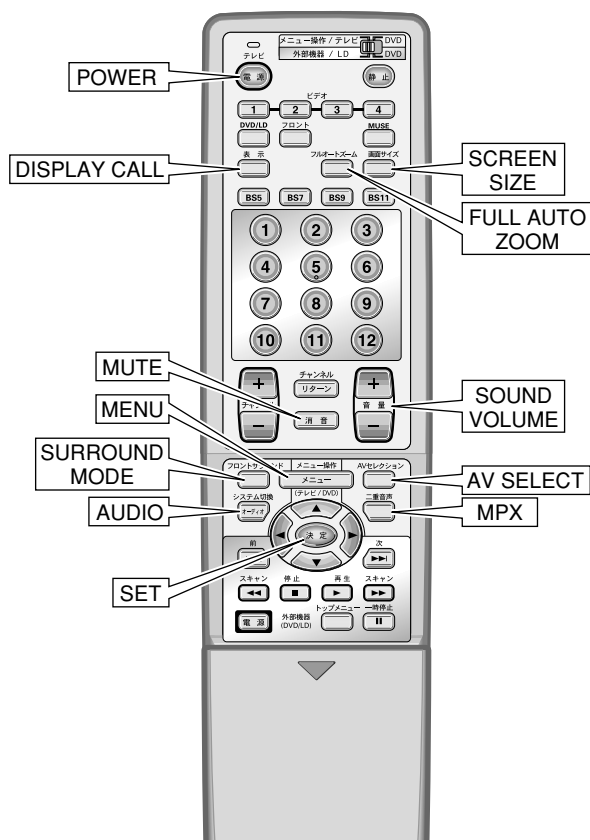




• AXD1459
(PDP-503CMX)



• AXD1432
(PDP-501HD)



• AXD1673
(PDP-502HD)

■ Notes on Operation with the Remote Control Unit

- In this manual, keys that are not on the remote control unit (AXD1459) supplied with the Plasma Display are designated as direct-select keys.
- To select items in Service Factory mode with the AXD1459, press the following keys as many times as required:
For selection of main items: MUTE key
For selection of other items: ▲ (UP) or ▼ (DOWN) key

■ Change of Settings When Entering Service Factory Mode

① Settings of MENU mode

- The settings for PICTURE items are reset to the center values.
Note: The PICTURE adjustment values to be reset are limited to the following:
For VIDEO: Those for the current signal mode of the selected input function
For a PC: Tables A-H are reset according to the history of the input signal mode
- All settings for SCREEN items are reset to the center values.
Note: The SCREEN adjustment values to be reset are only those for the current signal mode of the selected input function.
This is because the adjustment values of the MENU mode can be reset to the center values by executing FINAL SETUP or PICTURE DEFAULT.
- The settings for SETUP and OPTION of the MENU mode are maintained, except for the following:
COLOR TEMP: It is reset to MIDDLE.
AUTO POWER OFF/POWER MANAGEMENT: The settings are maintained, but these functions do not work.

② Adjustment values of the Integrator mode

- The following adjustment values for PICTURE and WHITE BAL are reset to the default values:
Note: The PICTURE and WHITE BAL adjustment values to be reset are limited to the following:
For VIDEO: Those for the current signal mode of the selected input function
For a PC: Tables A-H are reset according to the history of the input signal mode.
- The SCREEN settings are maintained.
- The settings for SETUP and OPTION of the Integrator menu are maintained, except for the following:
SIDE MASK LEVEL: The adjustment values are reset to the default values.
FULL MASK that has been set in Integrator mode: Released
OFF TIMER: Released
- The COLOR MODE (Integrator menu) settings that have been set in the Integrator menu are maintained.

③ Others

- If the input signal mode is changed in Service Factory mode, settings are changed according to the input signal mode, Service Factory mode is maintained, and its default display (INFORMATION VERSION) appears.
Note: When the input signal mode is changed, settings are reset as shown in ① and ② above.
- If FUNCTION switching is executed in Service Factory mode, the function is switched to the selected one, Service Factory mode is maintained, and its default display (INFORMATION VERSION) appears.
Note: When the FUNCTION is changed, settings are reset as shown in ① and ② above.
- The COLOR DETECT setting is performed based on the COLOR SYSTEM selected in MENU mode.
- Only the data at addresses 0100 to 01FF of the module microcomputer/EEPROM are copied (updated) to the module microcomputer area of the main microcomputer EEPROM.
- Various panel protection functions (still-picture detection, block-brightness detection, SCAN IC protection function) are deactivated.
Note: The protection functions are kept deactivated even after you exit Service Factory mode. To reactivate these functions, after exiting Service Factory mode, be sure to turn the power off, then back on.
- While there is no input, The partial setting, or while incompatible PC signals are input, settings that are not dependent on the signal mode can be performed. (For the MASK setting, see "MASK 1," and "MASK 2.") The setting items that are dependent on the input signal mode are grayed on the display and cannot be changed.

6.1.2 Table of Adjustment Items in Service Factory

SLOT

	Name	OSD Display Name	RS-232C Command	Service Factory Operation	Adjustment Range [OFFSET Reference Value]
CD	YDL	Y-DELAY	YDL	REF/OFS-SLOT-1	0 to 15 [8]
	YOUTLEV	Y-OUT LEVEL	YOL	REF/OFS-SLOT-2	0 to 63 [32]
	TINT	CD TINT	CTI	REF/OFS-SLOT-3	0 to 63 [32]
	CrOFFSET	CDR OFFSET	CDR	REF/OFS-SLOT-4	0 to 15 [8]
	CbOFFSET	CDB OFFSET	CDB	REF/OFS-SLOT-5	0 to 15 [8]
EXP	R-Y_LEVEL	R-Y LEVEL	LRY	REF/OFS-SLOT-6	0 to 255 [128]
	B-Y_LEVEL	B-Y LEVEL	LBV	REF/OFS-SLOT-7	0 to 255 [128]

RGB1

	Name	OSD Display Name	RS-232C Command	Service Factory Operation	Adjustment Range [OFFSET Reference Value]
MATRIX	PICTURE	MAT CONT	MCT	REF/OFS-RGB1-1	0 to 63 [32]
	BRIGHT	MAT BRIGHT	MBR	REF/OFS-RGB1-2	0 to 63 [32]
	COLOR	MAT COLOR	MCL	REF/OFS-RGB1-3	0 to 63 [32]
	HUE	MAT TINT	MTI	REF/OFS-RGB1-4	0 to 63 [32]
AD	MAINCONTRAST	AD MAIN CONT	MCA	REF/OFS-RGB1-5	0 to 255 [128]
	SUBRCONTRAST	AD R HIGH	GHA	REF/OFS-RGB1-6	0 to 255 [128]
	SUBGCONTRAST	AD G HIGH	BHA	REF/OFS-RGB1-7	0 to 255 [128]
	SUBBCONTRAST	AD B HIGH	RHA	REF/OFS-RGB1-8	0 to 255 [128]
	BRIGHTR	AD R LOW	GLA	REF/OFS-RGB1-9	0 to 255 [128]
	BRIGHTG	AD G LOW	BLA	REF/OFS-RGB1-10	0 to 255 [128]
	BRIGHTB	AD B LOW	RLA	REF/OFS-RGB1-11	0 to 255 [128]

RGB2

	Name	OSD Display Name	RS-232C Command	Service Factory Operation	Adjustment Range [OFFSET Reference Value]
IC102 W/B	COLOR	COLOR	COL	REF/OFS-RGB2-1	0 to 255 [128]
	TINT	TINT	TNT	REF/OFS-RGB2-2	0 to 255 [128]
IC30 W/B	MCONTRAST	CONTRAST	CNT	REF/OFS-RGB2-3	0 to 255 [128]
	MBRIGHT	BRIGHT	BRT	REF/OFS-RGB2-4	0 to 255 [128]
	R HIGH	R. HIGH	RHI	REF/OFS-RGB2-5	0 to 255 [255]
	G HIGH	G. HIGH	GHI	REF/OFS-RGB2-6	0 to 255 [255]
	B HIGH	B. HIGH	BHI	REF/OFS-RGB2-7	0 to 255 [255]
	R LOW	R. LOW	RLW	REF/OFS-RGB2-8	0 to 255 [128]
	G LOW	G. LOW	GLW	REF/OFS-RGB2-9	0 to 255 [128]
	B LOW	B. LOW	BLW	REF/OFS-RGB2-10	0 to 255 [128]

DIGITAL

	Name	OSD Display Name	RS-232C Command	Service Factory Operation	Adjustment Range [OFFSET Reference Value]
DIGITAL	PANEL R-HIGH	PANEL R-HIGH	PRH	REF/OFS-DIGITAL-1	0 to 255 [255]
	PANEL G-HIGH	PANEL G-HIGH	PGH	REF/OFS-DIGITAL-2	0 to 255 [255]
	PANEL B-HIGH	PANEL B-HIGH	PBH	REF/OFS-DIGITAL-3	0 to 255 [255]
	PANEL R-LOW	PANEL R-LOW	PRL	REF/OFS-DIGITAL-4	0 to 999 [512]
	PANEL G-LOW	PANEL G-LOW	PGL	REF/OFS-DIGITAL-5	0 to 999 [512]
	PANEL B-LOW	PANEL B-LOW	PBL	REF/OFS-DIGITAL-6	0 to 999 [512]
	ABL LEVEL	ABL LEVEL	ABL	REF/OFS-DIGITAL-7	0 to 255 [128]
	X-SUS-B	X-SUS-B	XSB	REF-DIGITAL-8	4 to 12
	X-SUS-G	X-SUS-G	XSG	REF-DIGITAL-9	4 to 12
	Y-SUS-B	Y-SUS-B	YSB	REF-DIGITAL-10	4 to 12
	Y-SUS-G	Y-SUS-G	YSG	REF-DIGITAL-11	4 to 12
	V-SUS	V-SUS	VSU	REF-DIGITAL-12	0 to 255
	V-OFFSET	V-OFFSET	VOF	REF-DIGITAL-13	0 to 255

SIDE MASK LEVEL (VIDEO OPTION)

	Name	OSD Display Name	RS-232C Command	Service Factory Operation	Adjustment Range [OFFSET Reference Value]
IC30	R SIDE MASK LEV	R SIDE MASK LEV	RSL	VOP-M LEV-1	0 to 255
	G SIDE MASK LEV	G SIDE MASK LEV	GSL	VOP-M LEV-2	0 to 255
	B SIDE MASK LEV	B SIDE MASK LEV	BSL	VOP-M LEV-3	0 to 255

COLOR TEMP (VIDEO OPTION)

	Name	OSD Display Name	RS-232C Command	Service Factory Operation	Adjustment Range [OFFSET Reference Value]
IC102	COLOR	COLOR		VOP-CT-3	0 to 255 [128]
	TINT	TINT		VOP-CT-4	0 to 255 [128]
IC30	MCONTRAST	CONTRAST		VOP-CT-1	0 to 255 [128]
	MBRIGHT	BRIGHT		VOP-CT-2	0 to 255 [128]
	R HIGH	R. HIGH		VOP-CT-5	0 to 255 [255]
	G HIGH	G. HIGH		VOP-CT-6	0 to 255 [255]
	B HIGH	B. HIGH		VOP-CT-7	0 to 255 [255]
	R LOW	R. LOW		VOP-CT-8	0 to 255 [128]
	G LOW	G. LOW		VOP-CT-9	0 to 255 [128]
	B LOW	B. LOW		VOP-CT-10	0 to 255 [128]

COLOR MODE2 (VIDEO OPTION)

	Name	OSD Display Name	RS-232C Command	Service Factory Operation	Adjustment Range [OFFSET Reference Value]
IC102	COLOR	COLOR		VOP-CM2-3	0 to 255 [128]
	TINT	TINT		VOP-CM2-4	0 to 255 [128]
IC30	MCONTRAST	CONTRAST		VOP-CM2-1	0 to 255 [128]
	MBRIGHT	BRIGHT		VOP-CM2-2	0 to 255 [128]
	R HIGH	R. HIGH		VOP-CM2-5	0 to 255 [255]
	G HIGH	G. HIGH		VOP-CM2-6	0 to 255 [255]
	B HIGH	B. HIGH		VOP-CM2-7	0 to 255 [255]
	R LOW	R. LOW		VOP-CM2-8	0 to 255 [128]
	G LOW	G. LOW		VOP-CM2-9	0 to 255 [128]
	B LOW	B. LOW		VOP-CM2-10	0 to 255 [128]

■Calculation of Adjustment Value in Service Factory Mode

- An actual adjustment value in Service Factory mode is the addition of the REFERENCE adjustment value and OFFSET adjustment value, subtracted by the OFFSET reference value (values indicated in brackets in the above tables).
Note: As for the items that do not have OFFSET adjustment values (R SIDE MASK LEV, G SIDE MASK LEV, as well B SIDE MASK LEV of the SIDE MASK LEVEL items, and X-SUS-B, X-SUS-G, Y-SUS-B, Y-SUS-G, V-SUS, and V-OFFSET of the DIGITAL items), the REFERENCE adjustment value becomes the actual adjustment value.
- As for COLOR MODE 2 and COLOR TEMP, the adjustment value of the selected mode subtracted by its OFFSET reference value (value indicated in brackets in the above tables) becomes the OFFSET value. Adding this value to the adjustment value of each adjustment item in RGB2 becomes the final adjustment value for the RGB2 devices (IC30 and IC102).

■Actual Calculation Examples

- Each adjustment value of SLOT/ RGB 1/RGB2/DIGITAL (REFERENCE value)
+
{ (OFFSET value) – [OFFSET reference value] } ... Calculation of a value to be added as OFFSET
- COLOR MODE2 OFFSET value
{ (COLOR MODE2 adjustment value) - [OFFSET reference value] } ... Calculation of a value to be added as OFFSET for COLOR MODE2
Note: Add it only when COLOR MODE2 is selected.
- COLOR TEMP OFFSET value
{ (COLOR TEMP adjustment value) - [OFFSET reference value] } ... Calculation of a value to be added as OFFSET for COLOR TEMP
Note: Add it only when COLOR TEMP 1,2,4, or 5 is selected.

Perform the addition in the normal operation, menu mode and COLOR TEMP adjustment mode of the Service Factory mode (in item VIDEO OPTION), and add the OFFSET value of the selected setting.

The addition of the COLOR TEMP OFFSET value is not needed in Integrator mode or in Service Factory mode (except for COLOR TEMP adjustment mode,) because the unit operates with the COLOR TEMP 3 settings.

6.1.3 Description of Service Factory Menu Display

1. In Adjustment Item

	1	5	10	15	20	25	30	35	40
1			OFS-SLOT			#1-S1-IN4-04-2*NT			
5									
10									
15			Y-DELAY				:	*** (***)	
16									

Display color : White
 Halftone : Blue (second line/15th line
 for each 5 to 36 columns)
 When the input signal mode is not identified, the
 adjustment value is displayed with
 "_____" (_____) , and the item indication is grayed.

- Second line / 6th to 16th columns : Display the higher layer of selection item ••• In Service Factory mode
- Second line / 6th to 7th columns : Display the ID No. ••• In RS-232C Factory mode
- Second line / 9th to 16th columns : Display the higher layer of selection item ••• In RS-232C Factory mode
- Second line / 19th to 20th columns : Current color mode setting
- Second line / 22th to 23th columns : Current slot type

Slot Type or Model Type	PDA-5002	PDP-503PRO and PRO-1000HD	Slot Manufactured by Other Vender	No SLOT
Display	S1	US	T1 to T8	NO

- Second line / 25th to 27th columns : Current function
 - Second line / 29th to 32th columns : Current signal mode
 - Second line / 32th columns : Current Screen size (See "Classification of input signal" for details in each value.)
- Signal mode displays for mode 03, mode 31, mode E1, mode 61 or mode 71

Setting	Signal Mode Display
VIDEO	03
VGA	31
WVGA	E1
XGA	61
WXGA	71

Signal mode displays for mode 12 or mode 13

HDTV Mode Setting (Integrator Menu)	Signal Mode Display
1080i	12
1035i	13

Display in the no signal and incompatible signal

Signal Mode Display	Signal Definition
FB	OUT OF RANGE (Signal that cannot be measured with the main microcomputer)
FC	OUT OF RANGE (Video system signal without video signal)
FD	OUT OF RANGE (Incompatible signal at DVI input)
FE	OUT OF RANGE (Incompatible signal that is measurable with the main microcomputer, and not applicable to FC and FD)
FF	No signal

- Second line / 33th column : Current input form

Input Form	Component	Video-RGB	Composite	Y/C
Display	#	@	*	/

Non-display (blank) excepting above form.

- Second line / 34th to 35th columns : Current color system

Color System	NTSC	PAL	SECAM	4.43NTSC	PAL-M	PAL-N	BLACK/WHITE
Display	NT	PL	SC	4N	PM	PN	BW

Non-display (blank) in a case of a color system other than those mentioned above or when the COLOR SYSTEM setting is fixed.

- 15th line / 6th to 24th columns : Current item selection
- 15th line / 26th to 35th columns :

When RANGE CHECK is selected: Current selecting value

- When REFERENCE is selected : Adjustment value
 - When OFFSET is selected : OFFSET value (adjustment value) * Adjustment value is REFERENCE value + OFFSET value.
 - When VIDEO OPTION is selected : No display
- When INITIALIZE is selected : Selected setting. (No display for an item having the lower layer.)

2. INFORMATION

1	1	5	10	15	20	25	30	35	40
1			INFO			#1-S1-IN4-02-2*NT			
			VERSION						
5									
			MAIN	UCOM	:	*	*	*	
			WIDE	UCOM	:	*	*	*	
			WIDE	FROM	:	*	*	*	
10									
			MODU	UCOM	:	*	*	*	
			PANE	UCOM	:	*	*	*	
			PANE	FROM	:	*	*	*	
15									
16									

- **Basic Operation**

- Display the state of each item

Rem Code	Key Name	Function & Display	Description	Remarks	Lower Layer
AA01	1	VERSION	Display of information for each item	Main, Wide, module and panel microcomputers : Ver	×
AA02	2	PD INFO		Wide flash (OSD) / Panel flash (Sequence) : Ver	×
AA03	3	NG INFO		Past eight times / Place (1st, 2nd) / Time Stamp	×
AA04	4	TEMPERATURE		AUDIO/FAN/MODULE/PANEL/WIDE/MAIN IIC/MODULE IIC/DEW	×
AA05	5	MEMO		1/2/3/FAN output	×
AA06	6			Display MEMO	×
AA07	7				
AA08	8				
AA09	9				
AA00	10				
AA46	11				
AA47	12				
AA4D	BS1				
AA4E	BS3				
AA4F	BS5				
AA50	BS7				
AA51	BS9				
AA52	BS11				
AA53	BS13				
AA54	BS15				
AA96	▲	Selection of upper items			
AA97	▼	Selection of lower items			
AA94	≫				
AA95	≪				
AA8A	SET				
AAD3-AF70 AA4A	AUDIO DISPLAY CALL	Shifting to various adjustment / setting screen.	INFORMATION		
AA1D	SURROUND MODE		RANGE CHECK		
AA59 AA43	AV SELECT AV MEMORY		REFERENCE		
AA1E	MPX		OFFSET		
AAD3-AF3C	SCREEN SIZE		VIDEO OPTION		
AAD3-AF36 AAD3-AF22	FULL AUTO ZOOM P.ZOOM		INITIALIZE		
AA49	MUTING	Shifting to next adjustment / setting screen.	RANGE CHECK		

- **Operating specifications**

- When this mode is entered, the VERSION display (the function called by pressing the "1" key) is displayed first.
- When any of the above keys are pressed, the corresponding operation is executed.

Note: The VERSION display is the default display for Service Factory mode.

3. OSD Display in INFORMATION

① VERSION

1	5	10	15	20	25	30	35	40
1								
5								
10								
15								
16								

② PD INFO.

1	5	10	15	20	25	30	35	40
1								
5								
10								
15								
16								

The power down point (1st or 1st and 2nd) and an hour meter at the time of the power down are displayed.

Up to eight power-downs are displayed. If the number of power-downs becomes more than 8, the latest data are added, and the oldest data are cleared.

Display details at PD INFORMATION

	Display	PD Point		Display	PD Point
1	X-DRV	X-DRIVE	5	ADRES	ADDRESS junction
2	X-DDC	X-DC/DC CONVERTER	6	ADR-K	ADDRESS resonance
3	Y-DRV	Y-DRIVE	7	POWER	Power supply
4	Y-DDC	Y-DC/DC CONVERTER	8	DC-DC	DC/DC CONVERTER (DIGITAL)

③ NG INFO.

1	1	5	10	15	20	25	30	35	40
1			INFO				#1-S1-IN4-02-2*NT		
5			NG	INFO					
			1	WIDE					
			2	WIDE					
			3	MODULE					
10			4	MAIN IIC					
			5	---					
			6	---					
			7	---					
			8	---					
15									
16									

The shutdown point is displayed.

Up to eight shutdown points are displayed. If the number of shutdowns becomes more than 8, the latest data are added, and the oldest data are cleared.

Display details at NG INFO

Display	Shutdown Point	Display	Shutdown Point
PANEL	Communication failure of the panel microcomputer	MODULE	Communication failure of the module microcomputer
MOD IIC	Communication failure of the module IIC	WIDE	Wide microcomputer
DEW	Condensation	MAIN IIC	Communication failure of the main IIC
TEMP	Abnormally high temperature	AUDIO	Failure in audio system
FAN	Failure in fans		

④ TEMPERATURE

1	1	5	10	15	20	25	30	35	40
1			INFO				#1-S1-IN4-02-2*NT		
5			TEMPERATURE						
			TEMP1	:	128				
			TEMP2	:	104				
			TEMP3	:	088				
10			FAN	:	135				
15									
16									

- Indicated values are those for microcomputer A/D input or D/A output (0 to 255).
- Temperature sensors 1, 2 and 3
- FAN

Note: Refer to "Shutdown diagnosis" in the "7.1.2 DIAGNOSIS FOR SHUTDOWN AND POWER-DOWN BY LED" to calculate real sensor temperature from each indicated value.

⑤ MEMO

1	1	5	10	15	20	25	30	35	40
1			INFO				#1-S1-IN4-02-2*NT		
5			MEMO						
			---	---	---	---	---		
			---	---	---	---	---		
10			---	---	---	---	---		
			---	---	---	---	---		
15									
16									

4. REFERENCE

1	5	10	15	20	25	30	35	40
1	REF				#1-S1-I N4-02-2*NT			
5								
10								
15	RGB1							
16								

Display color : White
 Halftone : Blue (Second line / 15th line
 for each 5th to 36th columns)

•Basic Operation

- Select the adjustment table.

Rem Code	Key Name	Function & Display	Description	Remarks	Lower Layer
AA01	1	RGB1	Selection of the adjustment table		○
AA02	2	RGB2			○
AA03	3	DIGITAL			○
AA04	4	SLOT			○
AA05	5				
AA06	6				
AA07	7				
AA08	8				
AA09	9				
AA00	10				
AA46	11				
AA47	12				
AA4D	BS1				
AA4E	BS3				
AA4F	BS5				
AA50	BS7				
AA51	BS9				
AA52	BS11				
AA53	BS13				
AA54	BS15				
AA96	▲	Selection of upper items			
AA97	▼	Selection of lower items			
AA94	»				
AA95	«				
AA8A	SET	Selection of the item and shift to lower layer			
AAD3-AF70 AA4A	AUDIO DISPLAY CALL	Shifting to various adjustment / setting screen	INFORMATION		
AA1D	SURROUND MODE		RANGE CHECK		
AA59 AA43	AV SELECT AV MEMORY		REFERENCE		
AA1E	MPX		OFFSET		
AAD3-AF3C	SCREEN SIZE		VIDEO OPTION		
AAD3-AF36 AAD3-AF22	FULL AUTO ZOOM P.ZOOM		INITIALIZE		
AA49	MUTING	Shifting to next adjustment / setting screen	OFFSET		

•Operating specifications

- If this setting screen is displayed when the unit is shifted from another mode, the RGB1 display (the function called by pressing the "1" key) is displayed first. If the unit is shifted back from a lower-layer display of this setting screen, the originally selected item will be displayed.
- When any of the above keys is pressed, the corresponding operation is executed.
- When INPUT5 (DVI) is selected, the RGB1 and SLOT items cannot be selected. (These displays are not skipped during item selection.)
- When a slot is not inserted, or when a slot manufactured by other vendor is inserted, the SLOT item cannot be selected. (The display is not skipped during item selection.)
- Items that cannot be selected are grayed on the display.

① REFERENCE — RGB1

1	5	10	15	20	25	30	35	40
1	REF - RGB1				#1 - S1 - IN4 - 02 - 2 * NT			
5								
10								
15	MAT CONT				: * * *			
16								

Display color : White

Half tone : Blue (second line / 15th line for each 5 to 36th columns)

● Basic Operation

Perform the adjustment of each parameter.

Rem Code	Key Name	Function & Display	Description	Remark	Lower Layer
AA01	1	MAT CONT	Retrieval and display of the adjustment value		×
AA02	2	MAT BRIGHT			×
AA03	3	MAT COLOR			×
AA04	4	MAT TINT			×
AA05	5	AD MAIN CONT			×
AA06	6	AD R HIGH			×
AA07	7	AD G HIGH			×
AA08	8	AD B HIGH			×
AA09	9	AD R LOW			×
AA00	10	AD G LOW			×
AA46	11	AD B LOW			×
AA47	12				
AA4D	BS1				
AA4E	BS3				
AA4F	BS5				
AA50	BS7				
AA51	BS9				
AA52	BS11				
AA53	BS13				
AA54	BS15				
AA96	▲	Selection of upper items			
AA97	▼	Selection of lower items			
AA94	»	Increasing the adjustment value of the selected parameter			
AA95	«	Decreasing the adjustment value of the selected parameter			
AA8A	SET	Storing the adjustment value and shifting to the next higher layer			
AAD3-AF70	AUDIO	Shifting to various adjustment / setting screen	INFORMATION		
AA4A	DISPLAY CALL		RANGE CHECK		
AA1D	SURROUND MODE		REFERENCE		
AA59	AV SELECT		OFFSET		
AA43	AV MEMORY		VIDEO OPTION		
AA1E	MPX		INITIALIZE		
AAD3-AF3C	SCREEN SIZE				
AAD3-AF36	FULL AUTO ZOOM	Shifting to next adjustment / setting screen.	OFFSET		
AAD3-AF22	P.ZOOM				
AA49	MUTING				

● Operating specifications

- When this mode is entered, the MAT CONT display (the function called by pressing the "1" key) is displayed first.
- When any of the above keys is pressed, the current adjustment value is stored in memory, then the corresponding operation will be executed.
- When the input signal mode is not identified, the adjustment value is displayed with "____," and the item indication is grayed.

② REFERENCE — RGB2

1	5	10	15	20	25	30	35	40
1	REF	RGB2		#1	S1	IN4	02	2*NT
5								
10								
15	CONTRAST							
16								

Display color : White
 Half tone : Blue (second line / 15th line for each 5 to 36th columns)

● Basic Operation

Perform the adjustment of each parameter.

Rem Code	Key Name	Function & Display	Description	Remarks	Lower Layer
AA01	1	CONTRAST	Retrieval and display of the adjustment value		×
AA02	2	BRIGHT			×
AA03	3	COLOR			×
AA04	4	TINT			×
AA05	5	R HIGH			×
AA06	6	G HIGH			×
AA07	7	B HIGH			×
AA08	8	R LOW			×
AA09	9	G LOW			×
AA00	10	B LOW			×
AA46	11				
AA47	12				
AA4D	BS1				
AA4E	BS3				
AA4F	BS5				
AA50	BS7				
AA51	BS9				
AA52	BS11				
AA53	BS13				
AA54	BS15				
AA96	▲	Selection of upper items			
AA97	▼	Selection of lower items			
AA94	»	Increasing the adjustment value of the selected parameter			
AA95	«	Decreasing the adjustment value of the selected parameter			
AA8A	SET	Storing the adjustment value and shifting to the next higher layer			
AAD3-AF70	AUDIO	Shifting to various adjustment / setting screen	INFORMATION		
AA4A	DISPLAY CALL		RANGE CHECK		
AA1D	SURROUND MODE		REFERENCE		
AA59	AV SELECT		OFFSET		
AA43	AV MEMORY		VIDEO OPTION		
AA1E	MPX		INITIALIZE		
AAD3-AF3C	SCREEN SIZE				
AAD3-AF36	FULL AUTO ZOOM	Shifting to next adjustment / setting screen.	OFFSET		
AAD3-AF22	P.ZOOM				
AA49	MUTING				

● Operating specifications

- When this mode is entered, the CONTRAST display (the function called by pressing the "1" key) is displayed first.
- When any of the above keys is pressed, the current adjustment value is stored in memory, then the corresponding operation will be executed.
- When the input signal mode is not identified, the adjustment value is displayed with "____," and the item indication is grayed.

③ REFERENCE — DIGITAL

	1	5	10	15	20	25	30	35	40													
1			REF-DIG			#1-S1-IN4-02-2*NT																
5																						
10																						
15	PANEL R-HIGH				:****																	
16																						

Display color : White
Half tone : Blue (second line / 15th line
for each 5 to 36th columns)

●Basic Operation

Perform the adjustment of each parameter.

Rem Code	Key Name	Function & Display	Description	Remarks	Lower Layer
AA01	1	PANEL R-HIGH	Retrieval and display of the adjustment value		×
AA02	2	PANEL G-HIGH			×
AA03	3	PANEL B-HIGH			×
AA04	4	PANEL R-LOW			×
AA05	5	PANEL G-LOW			×
AA06	6	PANEL B-LOW			×
AA07	7	ABL LEVEL			×
AA08	8	X-SUS-B			×
AA09	9	X-SUS-G			×
AA00	10	Y-SUS-B			×
AA46	11	Y-SUS-G			×
AA47	12	V-SUS			×
AA4D	BS1	V-OFFSET			×
AA4E	BS3				
AA4F	BS5				
AA50	BS7				
AA51	BS9				
AA52	BS11				
AA53	BS13				
AA54	BS15				
AA96	▲	Selection of upper items			
AA97	▼	Selection of lower items			
AA94	»	Increasing the adjustment value of the selected parameter			
AA95	«	Decreasing the adjustment value of the selected parameter			
AA8A	SET	Storing the adjustment value and shifting to the next higher layer			
AAD3-AF70	AUDIO	Shifting to various adjustment / setting screen	INFORMATION		
AA4A	DISPLAY CALL		RANGE CHECK		
AA1D	SURROUND MODE		REFERENCE		
AA59	AV SELECT		OFFSET		
AA43	AV MEMORY		VIDEO OPTION		
AA1E	MPX		INITIALIZE		
AAD3-AF3C	SCREEN SIZE				
AAD3-AF36	FULL AUTO ZOOM	Shifting to next adjustment / setting screen	OFFSET		
AAD3-AF22	P.ZOOM				
AA49	MUTING				

●Operating specifications

- When this mode is entered, the PANEL R-HIGH display (the function called by pressing the "1" key) is displayed first.
- When any of the above keys is pressed, the current adjustment value is stored in memory, then the corresponding operation will be executed.
- When the input signal mode is not identified, the adjustment value is displayed with "____," and the item indication is grayed.

④ REFERENCE — SLOT (When SLOT ST1 is connected) • This mode is effective only when SLOT ST1 is connected.

1	5	10	15	20	25	30	35	40
1	REF-SLOT			#1-S1-IN4-02-2*NT				
5								
10								
15	Y-DELAY							
16								

Display color : White
 Half tone : Blue (second line / 15th line for each 5 to 36th columns)

●Basic Operation

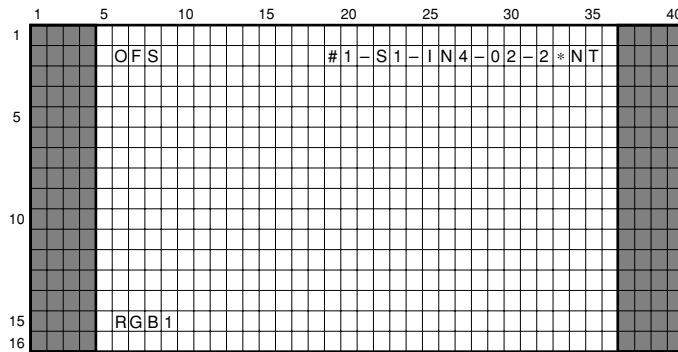
Perform the adjustment of each parameter.

Rem Code	Key Name	Function & Display	Description	Remarks	Lower Layer
AA01	1	Y-DELAY	Retrieval and display of the adjustment value		×
AA02	2	Y-OUT LEVEL			×
AA03	3	CD TINT			×
AA04	4	CDR OFFSET			×
AA05	5	CDB OFFSET			×
AA06	6	R-Y LEVEL			×
AA07	7	B-Y LEVEL			×
AA08	8				
AA09	9				
AA00	10				
AA46	11				
AA47	12				
AA4D	BS1				
AA4E	BS3				
AA4F	BS5				
AA50	BS7				
AA51	BS9				
AA52	BS11				
AA53	BS13				
AA54	BS15				
AA96	▲	Selection of upper items			
AA97	▼	Selection of lower items			
AA94	»	Increasing the adjustment value of the selected parameter			
AA95	«	Decreasing the adjustment value of the selected parameter			
AA8A	SET	Storing the adjustment value and shifting to the next higher layer			
AAD3-AF70	AUDIO	Shifting to various adjustment / setting screen	INFORMATION		
AA4A	DISPLAY CALL				
AA1D	SURROUND MODE		RANGE CHECK		
AA59	AV SELECT		REFERENCE		
AA43	AV MEMORY		OFFSET		
AA1E	MPX		VIDEO OPTION		
AAD3-AF3C	SCREEN SIZE		INITIALIZE		
AAD3-AF36	FULL AUTO ZOOM	Shifting to next adjustment / setting screen			
AAD3-AF22	P.ZOOM		OFFSET		
AA49	MUTING				

●Operating specifications

- When this mode is entered, the Y-DELAY display (the function called by pressing the "1" key) is displayed first.
- When any of the above keys is pressed, the current adjustment value is stored in memory, then the corresponding operation will be executed.
- When the input signal mode is not identified, the adjustment value is displayed with "____," and the item indication is grayed.

5. OFFSET



Display color : White
Half tone : Blue (second line / 15th line for each 5 to 36th columns)

●Basic Operation

Select the adjustment table

Rem Code	Key Name	Function & Display	Description	Remarks	Lower Layer
AA01	1	RGB1	Selection of the adjustment table		○
AA02	2	RGB2			○
AA03	3	DIGITAL			○
AA04	4	SLOT			○
AA05	5				
AA06	6				
AA07	7				
AA08	8				
AA09	9				
AA00	10				
AA46	11				
AA47	12				
AA4D	BS1				
AA4E	BS3				
AA4F	BS5				
AA50	BS7				
AA51	BS9				
AA52	BS11				
AA53	BS13				
AA54	BS15				
AA96	▲	Selection of upper items			
AA97	▼	Selection of lower items			
AA94	»				
AA95	«				
AA8A	SET	Selection of the item and shifting to lower layer			
AAD3-AF70 AA4A	AUDIO DISPLAY CALL	Shifting to various adjustment / setting screen	INFORMATION		
AA1D	SURROUND MODE		RANGE CHECK		
AA59 AA43	AV SELECT AV MEMORY		REFERENCE		
AA1E	MPX		OFFSET		
AAD3-AF3C	SCREEN SIZE		VIDEO OPTION		
AAD3-AF36 AAD3-AF22	FULL AUTO ZOOM P.ZOOM		INITIALIZE		
AA49	MUTING	Shifting to next adjustment / setting screen	VIDEO OPTION		

●Operating specifications

- If this setting screen is displayed when the unit is shifted from another mode, the RGB1 display (the function called by pressing the "1" key) is displayed first. If the unit is shifted back from a lower-layer display of this setting screen, the originally selected item will be displayed.
- When any of the above keys is pressed, the corresponding operation is executed.
- When INPUT5 (DVI) is selected, the RGB1 and SLOT items cannot be selected. (These displays are not skipped during item selection.)
- When a slot is not inserted, or when a slot manufactured by other vendor is inserted, the SLOT item cannot be selected. (The display is not skipped during item selection.)
- Items that cannot be selected are grayed on the display.
- Selection of each item is impossible when there is no input signal.

① OFFSET — RGB1

	1	5	10	15	20	25	30	35	40
1									
			OFS-RGB1			#1-S1-IN4-02-2*NT			
5									
10									
15			MAT	CONT			:	***	(***)
16									

Display color : White
 Half tone : Blue (second line / 15th line for each 5 to 36th columns)

●Basic Operation

Perform the adjustment of each parameter.

Rem Code	Key Name	Function & Display	Description	Remarks	Lower Layer
AA01	1	MAT CONT	Retrieval and display of the adjustment value		×
AA02	2	MAT BRIGHT			×
AA03	3	MAT COLOR			×
AA04	4	MAT TINT			×
AA05	5	AD MAIN CONT			×
AA06	6	AD R HIGH			×
AA07	7	AD G HIGH			×
AA08	8	AD B HIGH			×
AA09	9	AD R LOW			×
AA00	10	AD G LOW			×
AA46	11	AD B LOW			×
AA47	12				
AA4D	BS1				
AA4E	BS3				
AA4F	BS5				
AA50	BS7				
AA51	BS9				
AA52	BS11				
AA53	BS13				
AA54	BS15				
AA96	▲	Selection of upper items			
AA97	▼	Selection of lower items			
AA94	»	Increasing the adjustment value of the selected parameter			
AA95	«	Decreasing the adjustment value of the selected parameter			
AA8A	SET	Storing the adjustment value and shifting to the next higher layer			
AAD3-AF70 AA4A	AUDIO DISPLAY CALL	Shifting to various adjustment / setting screen	INFORMATION		
AA1D	SURROUND MODE		RANGE CHECK		
AA59 AA43	AV SELECT AV MEMORY		REFERENCE		
AA1E	MPX		OFFSET		
AAD3-AF3C	SCREEN SIZE		VIDEO OPTION		
AAD3-AF36 AAD3-AF22	FULL AUTO ZOOM P.ZOOM		INITIALIZE		
AA49	MUTING	Shifting to next adjustment / setting screen	VIDEO OPTION		

●Operating specifications

- When this mode is entered, the MAT CONT display (the function called by pressing the "1" key) is displayed first.
- When any of the above keys is pressed, the current adjustment value is stored in memory, then the corresponding operation will be executed.
- When the input signal mode is not identified, the adjustment value is displayed with "___(___)," and the item indication is grayed.

Display color : White
Half tone : Blue (second line / 15th line for
each 5 to 36th columns)

Perform the adjustment of each parameter.

- Operating specifications

- When this mode is entered, the CONTRAST display (the function called by pressing the "1" key) is displayed first.
- When any of the above keys is pressed, the current adjustment value is stored in memory, then the corresponding operation will be executed.
- When the input signal mode is not identified, the adjustment value is displayed with "____(____)," and the item indication is grayed.

③ OFFSET — DIGITAL

1	5	10	15	20	25	30	35	40
1	OFS-DIG			#1-S1-IN4-02-2*NT				
5								
10								
15	PANEL R-HIGH			:	*	*	*	(* * *)
16								

Display color : White
 Half tone : Blue (second line / 15th line for each 5 to 36th columns)

●Basic Operation

Perform the adjustment of each parameter.

Rem Code	Key Name	Function & Display	Description	Remarks	Lower Layer
AA01	1	PANEL R-HIGH	Retrieval and display of the adjustment value		×
AA02	2	PANEL G-HIGH			×
AA03	3	PANEL B-HIGH			×
AA04	4	PANEL R-LOW			×
AA05	5	PANEL G-LOW			×
AA06	6	PANEL B-LOW			×
AA07	7	ABL LEVEL			×
AA08	8	X-SUS-B	-	Selection is possible, but setting is impossible	×
AA09	9	X-SUS-G			×
AA00	10	Y-SUS-B			×
AA46	11	Y-SUS-G			×
AA47	12	V-SUS			×
AA4D	BS1	V-OFFSET			×
AA4E	BS3				
AA4F	BS5				
AA50	BS7				
AA51	BS9				
AA52	BS11				
AA53	BS13				
AA54	BS15				
AA96	▲	Selection of upper items			
AA97	▼	Selection of lower items			
AA94	»	Increasing the adjustment value of the selected parameter			
AA95	«	Decreasing the adjustment value of the selected parameter			
AA8A	SET	Storing the adjustment value and shifting to the next higher layer			
AAD3-AF70	AUDIO	Shifting to various adjustment / setting screen	INFORMATION		
AA4A	DISPLAY CALL		RANGE CHECK		
AA1D	SURROUND MODE		REFERENCE		
AA59	AV SELECT		OFFSET		
AA43	AV MEMORY		VIDEO OPTION		
AA1E	MPX		INITIALIZE		
AAD3-AF3C	SCREEN SIZE				
AAD3-AF36	FULL AUTO ZOOM	Shifting to next adjustment / setting screen	VIDEO OPTION		
AAD3-AF22	P.ZOOM				
AA49	MUTING				

●Operating specifications

- When this mode is entered, the PANEL R-HIGH display (the function called by pressing the "1" key) is displayed first.
- When any of the above keys is pressed, the current adjustment value is stored in memory, then the corresponding operation will be executed.
- When the input signal mode is not identified, the adjustment value is displayed with "____(____)," and the item indication is grayed.
- As the items X-SUS-B, X-SUS-G, Y-SUS-B, Y-SUS-G, V-SUS, and V-OFFSET do not have OFFSET adjustment values, making settings is not allowed. These items are grayed, and the adjustment values are displayed with "____(____)."

④ OFFSET — SLOT (When SLOT ST1 is connected) • This mode is effective only when SLOT ST1 is connected.

	1	5	10	15	20	25	30	35	4
1			OFS-SLOT		#1-S1-IN4-02-2*NT				
5									
10									
15			Y-DELAY			:	*	*	*
16							(*	*

Display color : White

Half tone : Blue (second line / 15th line for each 5 to 36th columns)

• Basic Operation

Perform the adjustment of each parameter.

Rem Code	Key Name	Function & Display	Description	Remarks	Lower Layer
AA01	1	Y-DELAY	Retrieval and display of the adjustment value		×
AA02	2	Y-OUT LEVEL			×
AA03	3	CD TINT			×
AA04	4	CDR OFFSET			×
AA05	5	CDB OFFSET			×
AA06	6	R-Y LEVEL			×
AA07	7	B-Y LEVEL			×
AA08	8				
AA09	9				
AA00	10				
AA46	11				
AA47	12				
AA4D	BS1				
AA4E	BS3				
AA4F	BS5				
AA50	BS7				
AA51	BS9				
AA52	BS11				
AA53	BS13				
AA54	BS15				
AA96	▲	Selection of upper items			
AA97	▼	Selection of lower items			
AA94	»	Increasing the adjustment value of the selected parameter			
AA95	«	Decreasing the adjustment value of the selected parameter			
AA8A	SET	Storing the adjustment value and shifting to the next higher layer			
AAD3-AF70	AUDIO	Shifting to various adjustment / setting screen	INFORMATION		
AA4A	DISPLAY CALL		RANGE CHECK		
AA1D	SURROUND MODE		REFERENCE		
AA59	AV SELECT		OFFSET		
AA43	AV MEMORY		VIDEO OPTION		
AA1E	MPX		INITIALIZE		
AAD3-AF3C	SCREEN SIZE				
AAD3-AF36	FULL AUTO ZOOM	Shifting to next adjustment / setting screen	VIDEO OPTION		
AAD3-AF22	P.ZOOM				
AA49	MUTING				

• Operating specifications

- When this mode is entered, the Y-DELAY display (the function called by pressing the "1" key) is displayed first.
- When any of the above keys is pressed, the current adjustment value is stored in memory, then the corresponding operation will be executed.
- When the input signal mode is not identified, the adjustment value is displayed with "___(___)," and the item indication is grayed.

•Operating specifications

- If this setting screen is displayed when the unit is shifted from another mode, the SIDE MASK LEVEL display (the function called by pressing the "1" key) is displayed first. If the unit is shifted back from a lower-layer display of this setting screen, the originally selected item will be displayed.
- When any of the above keys is pressed, the corresponding operation is executed.
- COLOR MODE setting during COLOR MODE adjustment
When Service Factory mode is entered, the settings for COLOR MODE become those that set on the Integrator menu. However, during COLOR MODE 2 adjustment, the unit operates in COLOR MODE 2 regardless of the settings made on the Integrator menu.
- COLOR TEMP setting during COLOR TEMP adjustment
When Service Factory mode is entered, the setting for COLOR TEMP becomes MIDDLE regardless of the user's setting. During COLOR TEMP adjustment, the unit operates in the selected COLOR TEMP mode.

① SIDE MASK LEV. Adjustment

	1			5				10				15				20				25				30				35				40
1																																
5																																
10																																
15																																
16																																

Display color : White
Half tone : Blue (second line / 15th line for each 5 to 36th columns)

●Basic Operation

Perform the adjustment of each parameter.

Rem Code	Key Name	Function & Display	Description	Remarks	Lower Layer
AA01	1	R SIDE MASK LEV	Retrieval and display of the adjustment value		×
AA02	2	G SIDE MASK LEV			×
AA03	3	B SIDE MASK LEV			×
AA04	4				
AA05	5				
AA06	6				
AA07	7				
AA08	8				
AA09	9				
AA00	10				
AA46	11				
AA47	12				
AA4D	BS1				
AA4E	BS3				
AA4F	BS5				
AA50	BS7				
AA51	BS9				
AA52	BS11				
AA53	BS13				
AA54	BS15				
AA96	▲	Selection of upper items			
AA97	▼	Selection of lower items			
AA94	»	Increasing the adjustment value of the selected parameter			
AA95	«	Decreasing the adjustment value of the selected parameter			
AA8A	SET	Storing the adjustment value and shifting to the next higher layer			
AAD3-AF70 AA4A	AUDIO DISPLAY CALL	Shifting to various adjustment / setting screen	INFORMATION		
AA1D	SURROUND MODE		RANGE CHECK		
AA59 AA43	AV SELECT AV MEMORY		REFERENCE		
AA1E	MPX		OFFSET		
AAD3-AF3C	SCREEN SIZE		VIDEO OPTION		
AAD3-AF36 AAD3-AF22	FULL AUTO ZOOM P.ZOOM		INITIALIZE		
AA49	MUTING		INITIALIZE		

●Operating specifications

- When this mode is entered, the R SIDE MASK LEVEL display (the function called by pressing the "1" key) is displayed first.
- When any of the above keys is pressed, the current adjustment value is stored in memory, then the corresponding operation will be executed.

② COLOR MODE2 Adjustment

1	5	10	15	20	25	30	35	40
1		VOP - C	MODE 2	# 1 - S 1 - I N 4 - 0 2 - 2 * N T				
5								
10								
15		CONTRAST						
16								

The color mode indicated on the second line, 35th column is the default setting and does not change according to the color mode being adjusted.

Display color : White
Half tone : Blue (second line / 15th line for each 5 to 36th columns)

● Basic Operation

Perform the adjustment of each parameter.

Rem Code	Key Name	Function & Display	Description	Remarks	Lower Layer
AA01	1	CONTRAST	Retrieval and display of the adjustment value		×
AA02	2	BRIGHT			×
AA03	3	COLOR			×
AA04	4	TINT			×
AA05	5	R HIGH			×
AA06	6	G HIGH			×
AA07	7	B HIGH			×
AA08	8	R LOW			×
AA09	9	G LOW			
AA00	10	B LOW			
AA46	11				
AA47	12				
AA4D	BS1				
AA4E	BS3				
AA4F	BS5				
AA50	BS7				
AA51	BS9				
AA52	BS11				
AA53	BS13				
AA54	BS15				
AA96	▲	Selection of upper items			
AA97	▼	Selection of lower items			
AA94	»	Increasing the adjustment value of the selected parameter			
AA95	«	Decreasing the adjustment value of the selected parameter			
AA8A	SET	Storing the adjustment value and shifting to the next higher layer			
AAD3-AF70 AA4A	AUDIO DISPLAY CALL	Shifting to various adjustment / setting screen	INFORMATION		
AA1D	SURROUND MODE		RANGE CHECK		
AA59 AA43	AV SELECT AV MEMORY		REFERENCE		
AA1E	MPX		OFFSET		
AAD3-AF3C	SCREEN SIZE		VIDEO OPTION		
AAD3-AF36 AAD3-AF22	FULL AUTO ZOOM P.ZOOM		INITIALIZE		
AA49	MUTING	Shifting to next adjustment / setting screen	INITIALIZE		

● Operating specifications

- When this mode is entered, the CONTRAST display (the function called by pressing the "1" key) is displayed first.
- When any of the above keys is pressed, the current adjustment value is stored in memory, then the corresponding operation will be executed.
- During COLOR MODE adjustment, the setting becomes COLOR MODE 2, and the adjusted value will be stored in memory, but the color mode setting will not be stored after adjustment is completed.

③ COLOR TEMP Adjustment

	1	5	10	15	20	25	30	35	40
1									
			V	O	P	-	C	T	
			M	I	D		H		
			#	1	-	S	1	-	
			I	N	4	-	0	2	
			-	2	*	N	T		
5									
10									
15			C	O	N	T	R	A	S
			T						
16							:	*	*
							*	*	

Display color : White
 Half tone : Blue (second line / 15th line for each 5 to 36th columns)

●Basic Operation

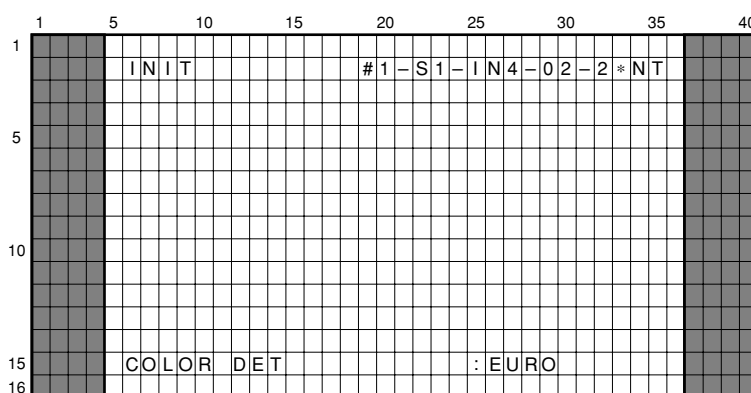
Perform the adjustment of each parameter.

Rem Code	Key Name	Function & Display	Description	Remarks	Lower Layer
AA01	1	CONTRAST	Retrieval and display of the adjustment value		×
AA02	2	BRIGHT			×
AA03	3	COLOR			×
AA04	4	TINT			×
AA05	5	R HIGH			×
AA06	6	G HIGH			×
AA07	7	B HIGH			×
AA08	8	R LOW			×
AA09	9	G LOW			×
AA00	10	B LOW			×
AA46	11				
AA47	12				
AA4D	BS1				
AA4E	BS3				
AA4F	BS5				
AA50	BS7				
AA51	BS9				
AA52	BS11				
AA53	BS13				
AA54	BS15				
AA96	▲	Selection of upper items			
AA97	▼	Selection of lower items			
AA94	»	Increasing the adjustment value of the selected parameter			
AA95	«	Decreasing the adjustment value of the selected parameter			
AA8A	SET	Storing the adjustment value and shifting to the next higher layer			
AAD3-AF70 AA4A	AUDIO DISPLAY CALL	Shifting to various adjustment / setting screen	INFORMATION		
AA1D	SURROUND MODE		RANGE CHECK		
AA59 AA43	AV SELECT AV MEMORY		REFERENCE		
AA1E	MPX		OFFSET		
AAD3-AF3C	SCREEN SIZE		VIDEO OPTION		
AAD3-AF36 AAD3-AF22	FULL AUTO ZOOM P.ZOOM		INITIALIZE		
AA49	MUTING		INITIALIZE		

●Operating specifications

- When this mode is entered, the CONTRAST display (the function called by pressing the "1" key) is displayed first.
- When any of the above keys is pressed, the current adjustment value is stored in memory, then the corresponding operation will be executed.
- During COLOR TEMP adjustment, the unit operates with the selected COLOR TEMP setting, and the adjusted value will be stored in memory, but the COLOR TEMP setting will return to MIDDLE after adjustment is completed.

7. INITIALIZE



Display color : White
Half tone : Blue (second line / 15th line for
each 5 to 36th columns)

- **Basic Operation**

- Perform the modification and confirmation of various settings.

Rem Code	Key Name	Function & Display	Description	Remarks	Lower Layer
AA01	1	COLOR DET	...→EURO→SA→ALL→...		×
AA02	2	EEP CHECK	EEPROM writing check		×
AA03	3	ACL SW	ON ↔ OFF		×
AA04	4	INTEGRATOR MODE	...→LOCK→UNLOCK→...		×
AA05	5	P&P WRITE ENA	For Plug & Play EEPROM writing		×
AA06	6	HOURLMETER SET	Setting the current hourmeter	Shifting to setting screen with SET (AA8A)	○
AA07	7	PULSEMETER SET	Setting the pulse hourmeter	Shifting to setting screen with SET (AA8A)	○
AA08	8	FINAL SET UP		Executing with SET (AA8A)	×
AA09	9	VIDEO STANDARD	...→0→1→2→3→4→5→6→7→8→9→A...		×
AA00	10	PC STANDARD	...→0→1→2→3→4→5→6→7→8→9→A...		×
AA46	11	VIDEO MODE1	...→0→1→2→3→4→5→6→7→8→9→A...		×
AA47	12	PC MODE1	...→0→1→2→3→4→5→6→7→8→9→A...		×
AA4D	BS1	EEP DATA READ		Shifting to setting screen with SET (AA8A)	○
AA4E	BS3	MASK1		Shifting to setting screen with SET (AA8A)	○
AA4F	BS5	MASK2		Shifting to setting screen with SET (AA8A)	○
AA50	BS7	MEMO		Shifting to writing screen with SET (AA8A)	○
AA51	BS9	SERVICE PARTS		Executing with SET (AA8A)	×
AA52	BS11	PICTURE DEFAULT		Executing with SET (AA8A)	×
AA53	BS13				
AA54	BS15				
AA96	▲	Selection of upper items			
AA97	▼	Selection of lower items			
AA94	»	Selection of the function			
AA95	«	Selection of the function			
AA8A	SET	Selecting the item and shifting to lower layer, or storing the adjustment value and shifting to upper layer.			
AAD3-AF70 AA4A	AUDIO DISPLAY CALL	Shifting to various adjustment / setting screen	INFORMATION		
AA1D	SURROUND MODE		RANGE CHECK		
AA59 AA43	AV SELECT AV MEMORY		REFERENCE		
AA1E	MPX		OFFSET		
AAD3-AF3C	SCREEN SIZE		VIDEO OPTION		
AAD3-AF36 AAD3-AF22	FULL AUTO ZOOM P.ZOOM		INITIALIZE		
AA49	MUTING	Shifting to next adjustment / setting screen	INFORMATION		

●Operating specifications

- If this setting screen is displayed when the unit is shifted from another mode, the COLOR DET display (the function called by pressing the "1" key) is displayed first. If the unit is shifted back from a lower-layer display of this setting screen, the originally selected item will be displayed.
- When any of the above keys is pressed, the corresponding operation is executed.
- As for the following items, the adjusted values will be stored in memory: COLOR DET., ACL SW, INTE. MODE, MEMO, VIDEO STANDARD, PC STANDARD, VIDEO MODE 1, PC MODE 1, HOURMETER SET, PULSEMETER SET, FINAL SETUP, MASK 1, MASK 2, and PICTURE DEFAULT.

●Function description

1. COLOR DET. : The color detection system is set.

← EURO → SA → ALL →

2. EEP CHECK: EEPROM writing is checked.

The rightmost two digits in hexadecimal notation from the results of addition of data at subaddresses 1760-177C (PDC XGA/SHARP data) of the EEPROM are displayed.

3. ACL SW: The ACL is set.

4. INTEGRATOR MODE: The integrator protection is set.

5. P&P WRITE ENA: The writing permission of the EEPROM for Plug & Play is set.

6. HOURMETER SET: The hourmeter is displayed and set.

	1	5	10	15	20	25	30	35	40
1									
5									
10									
15									
16									

The upper three digits of SET DATA can be changed:

▲▼ : To select numbers

◀▶ : To select one of the upper three digits to be changed

SET : To register the setting and shift to the confirmation screen for setting changes.

	1	5	10	15	20	25	30	35	40
1									
5									
10									
15									
16									

◀▶ : To select YES or NO

SET : When YES is selected, the SET DATA are stored in memory, and the initial display appears. When NO is selected, NOW DATA is maintained, and the initial display appears.

7. PULSEMETER SET: The pulse meter is displayed and set.

	1	5	10	15	20	25	30	35	40
1									
5									
10									
15									
16									

The upper three digits of SET DATA can be changed:

▲▼ : To select numbers

◀▶ : To select one of the upper three digits to be changed

SET : To register the setting and shift to the confirmation screen for setting changes.

1	5	10	15	20	25	30	35	40
1	INIT			#1-S1-IN4-02-2*NT				
5								
10			PULSEMETER	SET	?			
15			YES	NO				
16								

<<>> : To select YES or NO
 SET : When YES is selected, the SET DATA are stored in memory, and the initial display appears. When NO is selected, NOW DATA is maintained, and the initial display appears.

8. FINAL SETUP: Factory preset values are set.
(See FINAL SETUP Details.)
9. VIDEO STANDARD: The peak occurrences of STANDARD (USER MENU / POWER CONTROL) in the video system signal is set.
(Table 1 setting in the following table.) Note: Please do not change settings during service.
10. PC STANDARD: The peak occurrences of STANDARD (USER MENU / POWER CONTROL) in the PC system signal is set.
(Table 2 setting in the following table.) Note: Please do not change settings during service.
11. VIDEO MODE1: The peak occurrences of MODE1 (USER MENU / POWER CONTROL) in the video system signal is set.
(Table 3 setting in the following table.) Note: Please do not change settings during service.
12. PC MODE1: The peak occurrences of MODE1 (USER MENU / POWER CONTROL) in the PC system signal is set.
(Table 4 setting in the following table.) Note: Please do not change settings during service.

		Current Input Signal	
		VIDEO	PC
POWER CONTROL setting	STANDARD mode	Table1	Table2
	MODE1	Table3	Table4
	MODE2	PL6 (fixed)	

13. EEP DATA READ: Data on each address of the EEPROM are displayed.

1	5	10	15	20	25	30	35	40
1	INIT			#1-S1-IN4-02-2*NT				
5								
10								
15	EEP DATA READ			: 10FF-80				
16								

<<>> : To select a digit (four digits) of an address
 ▲▼ : To select numbers
 SET : To shift to the next higher layer
 Displayed data for each address are updated each time the address is changed.
 Display color : White (Selected address is yellow)
 Half tone : Blue (second line / 15th line for each 5 to 36th columns)

14. MASK1: To select the full mask. (Refer to "① MASK1" .)
Note: The last setting for either MASK 1 or MASK 2 is stored in memory.
15. MASK2: To select the mask pattern. (Refer to "② MASK2" .)
Note: The last setting for either MASK 1 or MASK 2 is stored in memory.

Notes on MASK 1 and MASK 2

- When any key is pressed, an OSD is displayed for two seconds, and during this period the full mask signal output is stopped.
- When the full mask is selected on the MASK selection menu, two seconds after the full mask is selected (with no key pressed during this period,) the displayed OSD disappears, then full mask is displayed in turn.
- To release the mask setting, use "M00" of RS-232C Factory Adjustment mode or "MASK OFF" of Service Factory menu.
(The mask setting cannot be released with FULL MASK OFF of the Integrator menu or "FMN" of the RS-232C Factory Adjustment mode.)

16. MEMO: Memo data are displayed and edited.

A

1	5	10	15	20	25	30	35	40	
1	INFO		#1-S1-IN4-02-2*NT						
5	MEMO								

10	-----								

	BACK								
15									
16									

<MEMO/SELECT>

- With the ▲ or ▼ key, a MEMO to be edited can be selected.
- If you press the SET key, the screen shifts to MEMO/EDIT.
- If you select BACK and then press the SET key, the screen shifts to the next higher layer.

B

1	5	10	15	20	25	30	35	40					
1	MEMO												
5	PDP-503CMX		BACK		SPACE								
	A	B	C	D	E	F	G	H	I	J	K	L	M
	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
	0	1	2	3	4	5	6	7	8	9	.	,	
10	'	'	/	-	()	@	*	:	#	?	&	~
	RESET		SPACE		END								
15													
16	◀ ▶ SELECT SET SET MENU EXIT												

<MEMO/EDIT>

- For details on editing, see "INPUT Label" of the user menu.
- The default display is "-----". (□: Space)
- When RESET is selected, the setting is reset to the default.

C

17. SERVICE PARTS : The PD number of the module microcomputer is rewritten to the parts recognition number for service.

See "7.1.3 AUTOMATIC BACKUP OF DIGITAL VIDEO ASSY DATA".

Parts recognition number for service: Modify the leftmost digit of the PD number to F

Example: F691 (an original PD number is 5691).

Note: Modification of the PD number to the ID number for service is needed only for the EEPROM of the module microcomputer.

The ID number for service in the data area of the module microcomputer in the EEPROM of the main microcomputer must not be changed.

D

18. PICTURE DEFAULT

- The data adjusted in Service Factory mode will become the new default settings for PICTURE, WHITE BAL, and SIDE MASK LEVEL of the Integrator menu.
- As long as PICTURE DEFAULT or FINAL SETUP is not executed, the settings made in Service Factory mode are not reflected in the video output data in modes other than Service Factory mode.
- To make the values adjusted during Service Factory mode go into force, PICTURE DEFAULT must be executed after adjustment.

Note: If PICTURE DEFAULT is executed:

- ① All the PICTURE items set on the user menu are reset.
- ② The values for PICTURE, WHITE BAL, and SIDE MASK LEVEL of the Integrator menu will become those of current adjustment values of Service Factory mode.

E

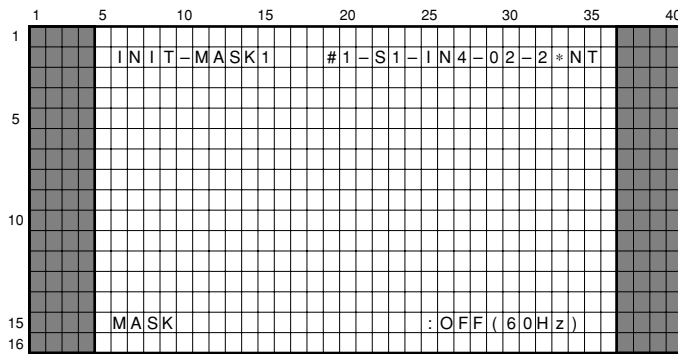
F

● FINAL SETUP Details

Items		Initial Setting	Remarks
Key input of the remote control unit			
Power supply (STANDBY/ON)			NO CARE
Input function		INPUT1	
Screen size	VIDEO	WIDE	(When the video signal is input) For each input function
	PC	① DOT BY DOT	(When the PC signal is input) For each input function and signal mode
		② 4 : 3 (including TYPE)	
		③ FULL (including TYPE)	Priority is ① → ② → ③
Vertical position adjustment (V scroll)		0	For each input function (at VIDEO)
KEY LOCK		UNLOCK	Common to all input functions
VOLUME		0	
User menu settings			
PICTURE		Default value for all adjustment items	For each input function and signal mode
SCREEN		Default value for all adjustment items	For each input function and signal mode (at PC)
INPUT LABEL		□INPUT*□	(*: 1 to 5). For each input function
AUTO POWER OFF		OFF	For each input function
POWER MANAGEMENT		OFF	INPUT1 (at PC) /5
COLOR TEMP		MIDDLE	For each input function (at VIDEO)
DIGITAL NR		LOW	
HIGH CONTRAST		OFF	
PURECINEMA		OFF	For each input function (at 525i (NTSC))
COLOR SYSTEM		AUTO	For each INPUT3/4
CLAMP POSITION		AUTO	For each INPUT1/2
3D Y/C MODE		MOTION	INPUT 4
SETTING		PC AUTO (at mode03, 31, E1)	For INPUT 1/2
		PC AUTO (at mode61, 71)	
		XGA (mode63, 73)	
VIDEO SIGNAL		RGB	
POWER CONTROL		STANDARD	(VIDEO/PC) Common to all input functions
AUTO FUNCTION		OFF	Common to all input functions
AUDIO OUT		FIXED	
Integrator menu setting item			
PICTURE		Default value for all adjustment items	For each input function and signal mode
WHITE BALANCE		Default value for all adjustment items	
SCREEN		Default value for all adjustment items	
2×2 MODE		OFF/Upper left	For each input function
BRT. ENHANCE	VIDEO	OFF	For each function that can be controlled by the PC
	PC	OFF	
HDTV MODE		1035i	Common to all input functions
VIDEO INPUT		COMPONENT1	750p/1125i/1125p
		COMPONENT2	525i/525p/625i/625p
SUB VOLUME		60	For each input function
OSD		ON	Common to all units
BAUD RATE		4800BPS	
TIMER		OFF/1/0.0/WHT	(Setting/Timer time/Mask time/mask color) Common to all input functions

Items		Initial Setting	Remarks
FULL MASK		OFF	Common to all units
SIDE MASK	R LEVEL	Default value	
	G LEVEL	Default value	
	B LEVEL	Default value	
MASK CONTROL		ON	
ORBITER MODE		OFF	
INVERSE MODE		OFF	
COLOR MODE		MODE1	Common to all units
MIRROR MODE		OFF	Common to all units
FAN CONTROL		AUTO	
MONITOR NAME		□□□PLASMA□□□	
ID NO SET		--	
SLOT INPUT		VIDEO (RGB)	
Factory Setting Item			
INTE MODE		UNLOCK	Common to all units
MASK1/2 setting		OFF	
ACL SW		ON	
COLOR DET			NO CARE
RS-232C Setting Item			
VIDEO MUTE		OFF	Common to all units
LED		ON	
100% display		OFF	

① MASK1



Display color : White
 Half tone : Blue (second line / 15th line for each 5 to 36th columns)

● Basic Operation

Perform the adjustment of each parameter.

Rem Code	Key Name	Function & Display	Description	Remarks	Lower Layer
AA01	1	MASK OFF		OFF	×
AA02	2	MASK51		White	×
AA03	3	MASK52		Cyan 274	×
AA04	4	MASK53		Mazenta 1023	×
AA05	5	MASK54		Flesh color	×
AA06	6	MASK55		Cyan 1023	×
AA07	7	MASK56		Light purple	×
AA08	8	MASK57		Sky blue	×
AA09	9	MASK58		Red	×
AA00	10	MASK59		Green	×
AA46	11	MASK60		Blue	×
AA47	12	MASK61		Black	×
AA4D	BS1	MASK62		Red 779	×
AA4E	BS3	MASK63		Reservation	×
AA4F	BS5	MASK64		Reservation	×
AA50	BS7	MASK65		Reservation	×
AA51	BS9	MASK66		Reservation	×
AA52	BS11				
AA53	BS13				
AA54	BS15				
AA96	▲	Selection of upper items			
AA97	▼	Selection of lower items			
AA94	»	Selection of free-running frequency	→50Hz→60Hz→70Hz→	Default: 60 Hz	
AA95	«	Selection of free-running frequency	→50Hz→60Hz→70Hz→	Default: 60 Hz	
AA8A	SET	Storing data of the selected item and shifting to upper layer			
AAD3-AF70	AUDIO	Shifting to various adjustment / setting screen	INFORMATION		
AA4A	DISPLAY CALL		RANGE CHECK		
AA1D	SURROUND MODE		REFERENCE		
AA59	AV SELECT		OFFSET		
AA43	AV MEMORY		VIDEO OPTION		
AA1E	MPX		INITIALIZE		
AAD3-AF3C	SCREEN SIZE				
AAD3-AF36	FULL AUTO ZOOM	Shifting to next adjustment / setting screen	INFORMATION		
AAD3-AF22	P.ZOOM				
AA49	MUTING				

● Operating specifications

- When this mode is entered, the MASK OFF display (the function called by pressing the "1" key) is displayed first. However, if any MASK setting has been already made, the selected MASK item is displayed first.
 - If this mode is entered with any of the MASK items in MASK 2 selected, the settings for MASK 2 become invalid, and the MASK OFF display (the function called by pressing the "1" key) is displayed first.
 - When any of the above keys is pressed, the current adjustment value is stored in memory, then the corresponding operation will be executed.
- Note:** During MASK setting, an OSD is not displayed. If another operation is selected, an OSD is displayed for 2 seconds after the MASK signal output is stopped, then the selected FULL MASK display will be displayed again.

② MASK2

	1	5	10	15	20	25	30	35	40																												
1	INIT-MASK2 #1-S1-IN4-02-2*NT																																				
5																																					
10																																					
15	MASK : OFF (60Hz)																																				
16																																					

Display color : White

Half tone : Blue (second line / 15th line for each 5 to 36th columns)

●Basic Operation

Perform the adjustment of each parameter.

Rem Code	Key Name	Function & Display	Description	Remarks	Lower Layer
AA01	1	MASK OFF		OFF	×
AA02	2	MASK 01		Pattern 1 (Ramp)	×
AA03	3	MASK 02		Pattern 2 (Color-bars)	×
AA04	4	MASK 03		Pattern 3 (Slanting lines)	×
AA05	5	MASK 04		Pattern 4 (For W/B Lo-Light adjustment 1/5Window (14%, 56%))	×
AA06	6	MASK 05		Pattern 5 (For W/B Lo-Light adjustment 1/5Window (Pred, Skin))	×
AA07	7	MASK 06		Pattern 6 (For W/B Peak adjustment 1/5Window (100%))	×
AA08	8	MASK 07		Pattern 7 (Peak signal : For peak measurement and adjustment 1/5Window (100%))	×
AA09	9	MASK 08		Pattern 8 (Reservation)	×
AA00	10	MASK 09		Pattern 9 (Window-A for scan IC protection test)	×
AA46	11	MASK 10		Pattern 10 (Window-B for scan IC protection test)	×
AA47	12	MASK 11		Pattern 11 (Reservation)	×
AA4D	BS1	MASK 12		Pattern 12 (Reservation)	×
AA4E	BS3	MASK 13		Pattern 13 (Reservation)	×
AA4F	BS5	MASK 14		Pattern 14 (Reservation)	×
AA50	BS7				
AA51	BS9				
AA52	BS11				
AA53	BS13				
AA54	BS15				
AA96	▲	Selection of upper items			
AA97	▼	Selection of lower items			
AA94	»	Selection of free-running frequency	↔→50Hz→60Hz→70Hz↔	Default: 60 Hz	
AA95	«	Selection of free-running frequency	↔→50Hz→60Hz→70Hz↔	Default: 60 Hz	
AA8A	SET	Storing data of the selected item and shifting to upper layer			
AAD3-AF70	AUDIO	Shifting to various adjustment / setting screen	INFORMATION		
AA4A	DISPLAY CALL		RANGE CHECK		
AA1D	SURROUND MODE		REFERENCE		
AA59	AV SELECT		OFFSET		
AA43	AV MEMORY		VIDEO OPTION		
AA1E	MPX		INITIALIZE		
AAD3-AF3C	SCREEN SIZE				
AAD3-AF36	FULL AUTO ZOOM	Shifting to next adjustment / setting screen	INFORMATION		
AAD3-AF22	P.ZOOM				
AA49	MUTING				

● Operating specifications

- When this mode is entered, the MASK OFF display (the function called by pressing the "1" key) is displayed first. However, if any MASK setting has been already made, the selected MASK item is displayed first.
- If this mode is entered with any of the MASK items in MASK 1 selected, the settings for MASK 1 become invalid, and the MASK OFF display (the function called by pressing the "1" key) is displayed first.
- When any of the above keys is pressed, the current adjustment value is stored in memory, then the corresponding operation will be executed.

Note: During MASK setting, an OSD is not displayed. If another operation is selected, an OSD is displayed for 2 seconds after the MASK signal output is stopped, then the selected MASK display will be displayed again.

● Cassification 1 of Input Signal Mode (VIDEO)

SIG Mode	Signal Type	OSD display	V. Frequency fv (Hz)	H. Frequency fh (Hz)	Number of Pixels	INPUT5 (DVI input) Compatibility
00 • 5 00 • 6 00 • 7 00 • 8 00 • 9	SDTV • 625i (PAL/SECAM)	(100% tentative) 4 : 3 FULL ZOOM WIDE	50	15.6	1280 × 768 984 × 768 1280 × 768 1280 × 768 1280 × 768	× (incompatible)
01 • 5 01 • 6 01 • 7 01 • 8 01 • 9	SDTV • 625p (PAL • Progressive)	(100% tentative) 4 : 3 FULL ZOOM WIDE	50	31.2	1280 × 768 984 × 768 1280 × 768 1280 × 768 1280 × 768	× (incompatible)
02 • 5 02 • 6 02 • 7 02 • 8 02 • 9	SDTV • 525i (NTSC/4.43NTSC)	(100% tentative) 4 : 3 FULL ZOOM WIDE	60	15.7	1280 × 768 984 × 768 1280 × 768 1280 × 768 1280 × 768	× (incompatible)
03 • 5 03 • 6 03 • 7 03 • 8 03 • 9	SDTV • 525p (NTSC • Progressive)	(100% tentative) 4 : 3 FULL ZOOM WIDE	60	31.5	1280 × 768 984 × 768 1280 × 768 1280 × 768 1280 × 768	× (incompatible)
11 • 5 11 • 7	HDTV • 1125i (Effective scanning lines: 1080)	(100%) FULL	50	28.1	1280 × 768 1280 × 768	× (incompatible)
12 • 5 12 • 7	HDTV • 1125i (Effective scanning lines: 1080)	(100%) FULL	60	33.8	1280 × 768 1280 × 768	× (incompatible)
13 • 5 13 • 7	HDTV • 1125i (Effective scanning lines: 1035)	(100%) FULL	60	33.8	1280 × 768 1280 × 768	× (incompatible)
14 • 5 14 • 7	HDTV • 750p (Effective scanning lines: 720)	(100%) FULL	60	45.0	1280 × 768 1280 × 768	× (incompatible)
15 • 5 15 • 7	HDTV • 1125p (Effective scanning lines: 1080)	(100%) FULL	60	67.5	1280 × 768 1280 × 768	× (incompatible)

● Classification 2 of Input Signal Mode (PC)

SIG Mode	Signal Type	OSD Display	V. Frequency v (Hz)	H. Frequency h (Hz)	Number of Pixels	INPUT5 (DVI input) Compatibility
20 • 2	640 × 400	FULL	56	24.8	1280 × 768	× (incompatible)
23 • 2	640 × 400	FULL	70	31.5	1280 × 768	△ (compatible informally)
31 • 0 31 • 1 31 • 2	640 × 480	DOT BY DOT 4 : 3 FULL	60	31.5	640 × 480 1024 × 768 1280 × 768	○ (compatible)
32 • 0 32 • 1 32 • 2	640 × 480	DOT BY DOT 4 : 3 FULL	66	35.0	640 × 480 1024 × 768 1280 × 768	△ (compatible informally)
34 • 0 34 • 1 34 • 2	640 × 480	DOT BY DOT 4 : 3 FULL	72	37.9	640 × 480 1024 × 768 1280 × 768	△ (compatible informally)
35 • 0 35 • 1 35 • 2	640 × 480	DOT BY DOT 4 : 3 FULL	75	37.5	640 × 480 1024 × 768 1280 × 768	△ (compatible informally)
36 • 0 36 • 1 36 • 2	640 × 480	DOT BY DOT 4 : 3 FULL	85	43.3	640 × 480 1024 × 768 1280 × 768	△ (compatible informally)
40 • 4 40 • 1 40 • 2	800 × 600	DOT BY DOT 4 : 3 FULL	56	35.1	800 × 600 1024 × 768 1280 × 768	○ (compatible)
41 • 0 41 • 1 41 • 2	800 × 600	DOT BY DOT 4 : 3 FULL	60	37.9	800 × 600 1024 × 768 1280 × 768	○ (compatible)
44 • 0 44 • 1 44 • 2	800 × 600	DOT BY DOT 4 : 3 FULL	72	48.1	800 × 600 1024 × 768 1280 × 768	△ (compatible informally)
45 • 0 45 • 1 45 • 2	800 × 600	DOT BY DOT 4 : 3 FULL	75	46.9	800 × 600 1024 × 768 1280 × 768	△ (compatible informally)
46 • 0 46 • 1 46 • 2	800 × 600	DOT BY DOT 4 : 3 FULL	85	53.7	800 × 600 1024 × 768 1280 × 768	△ (compatible informally)
55 • 0 55 • 1 55 • 2	832 × 624	DOT BY DOT 4 : 3 FULL	75	49.7	832 × 624 1024 × 768 1280 × 768	△ (compatible informally)
61 • 1 61 • 2	1024 × 768	DOT BY DOT FULL	60	48.4	1024 × 768 1280 × 768	○ (compatible)
63 • 1 63 • 2	1024 × 768	DOT BY DOT FULL	70	56.5	1024 × 768 1280 × 768	△ (compatible informally)
65 • 1 65 • 2	1024 × 768	DOT BY DOT FULL	75	60.0	1024 × 768 1280 × 768	△ (compatible informally)
66 • 1 66 • 2	1024 × 768	DOT BY DOT FULL	85	68.7	1024 × 768 1280 × 768	△ (compatible informally)
70 • 2	1280 × 768	DOT BY DOT	56	45.1	1024 × 768	○ (compatible)
71 • 2	1280 × 768	DOT BY DOT	60	48.1	1024 × 768	○ (compatible)
73 • 2	1280 × 768	DOT BY DOT	70	55.5	1024 × 768	△ (compatible informally)

SIG Mode	Signal Type	OSD Display	V. Frequency v (Hz)	H. Frequency h (Hz)	Number of Pixels	INPUT5 (DVI input) Compatibility
81 • 1 81 • 2	1152 × 864	4 : 3 (TYPE) FULL (TYPE)	60	53.7	1024 × 768 1280 × 768	○ (compatible)
84 • 1 84 • 2	1152 × 864	4 : 3 (TYPE) FULL (TYPE)	72	64.9	1024 × 768 1280 × 768	△ (compatible)
85 • 1 85 • 2	1152 × 864	4 : 3 (TYPE) FULL (TYPE)	75	67.5	1024 × 768 1280 × 768	△ (compatible)
95 • 1 95 • 2	1152 × 870	4 : 3 (TYPE) FULL (TYPE)	75	68.7	1016 × 768 1280 × 768	△ (compatible)
A2 • 1 A2 • 2	1152 × 900	4 : 3 (TYPE) FULL (TYPE)	66	62.0	984 × 768 1280 × 768	△ (compatible)
A5 • 1 A5 • 2	1152 × 900	4 : 3 (TYPE) FULL (TYPE)	76	71.7	984 × 768 1280 × 768	△ (compatible)
B1 • 1 B1 • 2	1280 × 960	4 : 3 (TYPE) FULL (TYPE)	60	60.0	1024 × 768 1280 × 768	○ (compatible)
C1 • 1 C1 • 2 C1 • 3	1280 × 1024	4 : 3 (TYPE) FULL (TYPE) PARTIAL	60	64.0	960 × 768 1280 × 768 1280 × 768	○ (compatible)
C5 • 1 C5 • 2	1280 × 1024	4 : 3 (TYPE) FULL (TYPE)	75	80.0	960 × 768 1280 × 768	× (incompatible)
C6 • 1 C6 • 2	1280 × 1024	4 : 3 (TYPE) FULL (TYPE)	85	91.1	960 × 768 1280 × 768	× (incompatible)
D1 • 1 D1 • 2	1600 × 1200	4 : 3 (TYPE) FULL (TYPE)	60	75.0	1024 × 768 1280 × 768	× (incompatible)
D2 • 1 D2 • 2	1600 × 1200	4 : 3 (TYPE) FULL (TYPE)	65	81.3	1024 × 768 1280 × 768	× (incompatible)
D3 • 1 D3 • 2	1600 × 1200	4 : 3 (TYPE) FULL (TYPE)	70	87.5	1024 × 768 1280 × 768	× (incompatible)
D5 • 1 D5 • 2	1600 × 1200	4 : 3 (TYPE) FULL (TYPE)	75	93.8	1024 × 768 1280 × 768	× (incompatible)
D6 • 1 D6 • 2	1600 × 1200	4 : 3 (TYPE) FULL (TYPE)	85	106.3	1024 × 768 1280 × 768	× (incompatible)
E1 • 1 E1 • 2	852 × 480	DOT BY DOT FULL	60	31.7	852 × 480 1280 × 768	○ (compatible)

6.2 ADJUSTMENT REQUIRED WHEN THE SET IS REPAIRED OR REPLACED

■ RGB Assy

● When repaired

1. Adjustment is impossible when the Matrix IC or AD/PLL/AMP IC is replaced.
2. Adjustment is unnecessary in other cases.

● When replaced

White balance adjustment

■ SW POWER SUPPLY Module

● When replaced

No adjustment required.

■ DIGITAL VIDEO Assy

● When repaired

No adjustment required.

● When replaced

1. Adjustment is unnecessary when only the DIGITAL VIDEO Assy is replaced.
2. When the RGB Assy is replaced at the same time as this assembly, remove the IC1204 (24LC04(1)SN-TBB) from the old PC board of the DIGITAL VIDEO Assy and attach it to the new PC board.
3. If you are reusing the collected old PC board as a service part, attach the new IC1204 to the board.

■ Y DRIVE Assy

● When repaired

Note: If the Pulse Module fails, it is not possible to repair the Y DRIVE Assy by replacing only the Pulse Module. Replace the entire Y DRIVE Assy.

1. VOFS/VH/IC5V voltage adjustment

● When replaced

1. Panel white balance adjustment

■ X DRIVE Assy

● When repaired

Note: If the Pulse Module fails, it is not possible to repair the X DRIVE Assy by replacing only the Pulse Module. Replace the entire X DRIVE Assy.

1. VRN voltage adjustment

● When replaced

1. Panel white balance adjustment

■ Video Card (PDA-5002)

For Adjustment, Refer to the service manual ARP3093 for PDA-5002.

● When repaired

1. Y LEVEL adjustment
2. Color difference and TINT adjustment

● When replaced

No adjustment required.

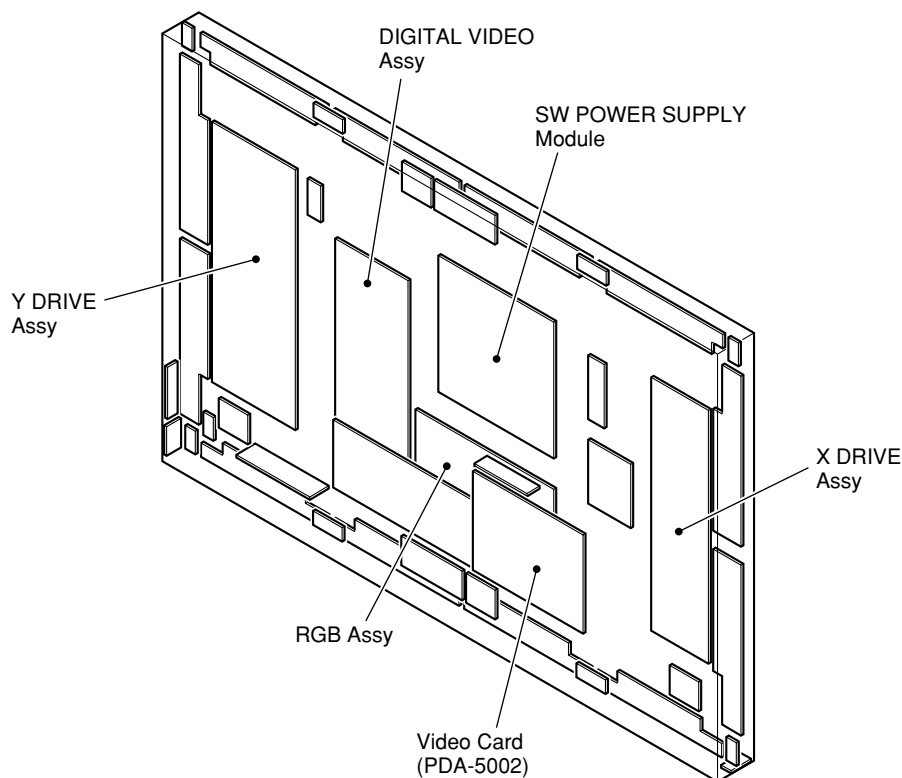


Fig. 1 Configuration of the PC Board (rear side view)

6.3 ADJUSTMENT

6.3.1 MAIN UNIT ADJUSTMENT

■ VOFS/VH/IC5V Voltage Adjustment

Input Signal	Adjusting Point	Adjusting Method																																																																																																																																				
White 100%	VR2701 (VOFS) (Y DRIVE Assy)	<p>VOFS (Offset voltage) adjustment</p> <p>Method 1</p> <p>1. Make a note of adjustment value of V-OFFSET of REF-DIG mode in Factory mode.</p> <p>2. Set the VOFS ADJ adjustment value to center (128).</p> <p>3. Turn the VR2701 so that the voltage between K2710 (VOFS) and K2703 (SUS GND) becomes 45V.</p> <p>4. Return the VOFS ADJ adjustment value to that you wrote down in Step 1.</p> <p>Method 2</p> <p>1. Read the adjustment value of V-OFFSET of REF-DIG mode in Factory mode.</p> <p>2. Turn the VR2701 so that the voltage between K2710 (VOFS) and K2703 (SUS GND) becomes the corresponding value indicated in the table below (tolerance: ± 0.5V):</p> <table><tr><th>Input Command</th><th>DAC Output</th><th>Setting Voltage</th><th>Input Command</th><th>DAC Output</th><th>Setting Voltage</th></tr><tr><td>VOF000</td><td>0.4</td><td>25</td><td>VOF134</td><td>2.599212598</td><td>45.94488</td></tr><tr><td>VOF006</td><td>0.4984375</td><td>25.9375</td><td>VOF141</td><td>2.71496063</td><td>47.04724</td></tr><tr><td>VOF013</td><td>0.61328125</td><td>27.03125</td><td>VOF147</td><td>2.814173228</td><td>47.99213</td></tr><tr><td>VOF019</td><td>0.71171875</td><td>27.96875</td><td>VOF153</td><td>2.913385827</td><td>48.93701</td></tr><tr><td>VOF026</td><td>0.8265625</td><td>29.0625</td><td>VOF160</td><td>3.029133858</td><td>50.03937</td></tr><tr><td>VOF032</td><td>0.925</td><td>30</td><td>VOF166</td><td>3.128346457</td><td>50.98425</td></tr><tr><td>VOF038</td><td>1.0234375</td><td>30.9375</td><td>VOF172</td><td>3.227559055</td><td>51.92913</td></tr><tr><td>VOF045</td><td>1.13828125</td><td>32.03125</td><td>VOF179</td><td>3.343307087</td><td>53.0315</td></tr><tr><td>VOF051</td><td>1.23671875</td><td>32.96875</td><td>VOF185</td><td>3.442519685</td><td>53.97638</td></tr><tr><td>VOF058</td><td>1.3515625</td><td>34.0625</td><td>VOF191</td><td>3.541732283</td><td>54.92126</td></tr><tr><td>VOF064</td><td>1.45</td><td>35</td><td>VOF198</td><td>3.657480315</td><td>56.02362</td></tr><tr><td>VOF070</td><td>1.5484375</td><td>35.9375</td><td>VOF204</td><td>3.756692913</td><td>56.9685</td></tr><tr><td>VOF077</td><td>1.66328125</td><td>37.03125</td><td>VOF211</td><td>3.872440945</td><td>58.07087</td></tr><tr><td>VOF083</td><td>1.76171875</td><td>37.96875</td><td>VOF217</td><td>3.971653543</td><td>59.01575</td></tr><tr><td>VOF090</td><td>1.8765625</td><td>39.0625</td><td>VOF223</td><td>4.070866142</td><td>59.96063</td></tr><tr><td>VOF096</td><td>1.975</td><td>40</td><td>VOF230</td><td>4.186614173</td><td>61.06299</td></tr><tr><td>VOF102</td><td>2.0734375</td><td>40.9375</td><td>VOF236</td><td>4.285826772</td><td>62.00787</td></tr><tr><td>VOF109</td><td>2.18828125</td><td>42.03125</td><td>VOF242</td><td>4.38503937</td><td>62.95276</td></tr><tr><td>VOF115</td><td>2.28671875</td><td>42.96875</td><td>VOF249</td><td>4.500787402</td><td>64.05512</td></tr><tr><td>VOF122</td><td>2.4015625</td><td>44.0625</td><td>VOF255</td><td>4.6</td><td>65</td></tr><tr><td>VOF128</td><td>2.5</td><td>45</td><td></td><td></td><td></td></tr></table> <p>The symptom in case of mis-adjustment</p> <p>If the VOFS Voltage adjustment is not performed properly, blinking luminance points like dots appear. If the voltage is deviated greatly from the proper adjustment point, the panel will light as white.</p>	Input Command	DAC Output	Setting Voltage	Input Command	DAC Output	Setting Voltage	VOF000	0.4	25	VOF134	2.599212598	45.94488	VOF006	0.4984375	25.9375	VOF141	2.71496063	47.04724	VOF013	0.61328125	27.03125	VOF147	2.814173228	47.99213	VOF019	0.71171875	27.96875	VOF153	2.913385827	48.93701	VOF026	0.8265625	29.0625	VOF160	3.029133858	50.03937	VOF032	0.925	30	VOF166	3.128346457	50.98425	VOF038	1.0234375	30.9375	VOF172	3.227559055	51.92913	VOF045	1.13828125	32.03125	VOF179	3.343307087	53.0315	VOF051	1.23671875	32.96875	VOF185	3.442519685	53.97638	VOF058	1.3515625	34.0625	VOF191	3.541732283	54.92126	VOF064	1.45	35	VOF198	3.657480315	56.02362	VOF070	1.5484375	35.9375	VOF204	3.756692913	56.9685	VOF077	1.66328125	37.03125	VOF211	3.872440945	58.07087	VOF083	1.76171875	37.96875	VOF217	3.971653543	59.01575	VOF090	1.8765625	39.0625	VOF223	4.070866142	59.96063	VOF096	1.975	40	VOF230	4.186614173	61.06299	VOF102	2.0734375	40.9375	VOF236	4.285826772	62.00787	VOF109	2.18828125	42.03125	VOF242	4.38503937	62.95276	VOF115	2.28671875	42.96875	VOF249	4.500787402	64.05512	VOF122	2.4015625	44.0625	VOF255	4.6	65	VOF128	2.5	45			
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	VR2703 (VH) (Y DRIVE Assy)	<p>VH (voltage for the scan IC) Adjustment</p> <p>Adjust so that the voltage between K2716 (VH) and K2720 (PSUS) becomes 103V ± 0.5V. PSUS (=GNDH) is a floating GND and its electric potential is different from that of chassis GND. Be sure not to short-circuit PSUS (=GNDH) and another GND, because that may damage the unit.</p> <p>The symptom in case of mis-adjustment</p> <p>If the VH adjustment is not performed properly, blinking luminance points like dots appear. If the voltage is deviated greatly from the proper adjustment point, the panel will light as white.</p>																																																																																																																																				
	VR2702 (IC5V) (Y DRIVE Assy)	<p>IC5V Adjustment</p> <p>Adjust so that the voltage between K2707 (IC5V) and K2720 (PSUS) becomes 5.0V ± 0.1V. PSUS (=GNDH) is a floating GND and its electric potential is different from that of chassis GND. Be sure not to short-circuit PSUS (=GNDH) and another GND, because that may damage the unit.</p>																																																																																																																																				
Note : Be sure to measure between specified test points.																																																																																																																																						

■ Sustain Pulse Waveform Adjustment

Input Signal	Adjusting Point	Adjusting Method
White 100%	REF_DIG mode in Factory mode X-SUS-B : key 9 Y-SUS-B : key 11	X-SUS-B, Y-SUS-B Adjustment Set to the indicated value with the keys on the remote control unit (9 and 11 keys).

■ VRN Voltage Adjustment

Input Signal	Adjusting Point	Adjusting Method
White 100%	VR3701 (VRN) (X DRIVE Assy)	VRN (minus reset voltage adjustment) Adjust so that the voltage between K3707 (VRN) and K3702 (SUS-GND) becomes $-300V \pm 1.0V$.

■ Panel-White-Balance Adjustment

Input Signal	Adjusting Point	Adjusting Method									
		<p>Adjust the OFFSET-DIGITAL parameters (from PANEL R-HIGH to PANEL B-LOW) in Factory mode.</p> <p>For adjustment, use the mask (MASK04) signal of Factory mode for display.</p> <p>Reference : Adjustment values when using the Minolta color-difference meter (A-100)</p> <table border="1"> <thead> <tr> <th></th><th>MASK Left Side</th><th>MASK Right Side</th></tr> </thead> <tbody> <tr> <td>x</td><td>295</td><td>291</td></tr> <tr> <td>y</td><td>306</td><td>300</td></tr> </tbody> </table>		MASK Left Side	MASK Right Side	x	295	291	y	306	300
	MASK Left Side	MASK Right Side									
x	295	291									
y	306	300									

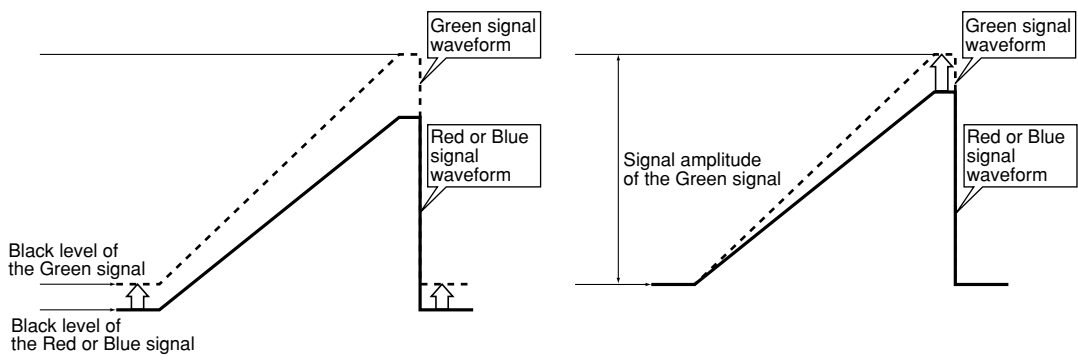
■ Mask-Level Adjustment

Input Signal	Adjusting Point	Adjusting Method
	VIDEO OPTION mode in Factory mode SIDE MASK LEV. R SIDE LEVEL : key 1 G SIDE LEVEL : key 2 B SIDE LEVEL : key 3	Side mask color / Level Adjustment Set the indicated value with the keys on the remote control unit (1, 2 and 3 keys).

■ White-Balance Adjustment

- A Video Card (PDA-5002 or equivalent) is necessary for white balance adjustment for video signal of the RGB Assy.
- Adjust with video system signal (525i) and RGB (PC VGA) signal.
- Adjust so that the level and amplitude of the RED and BLUE signals become the same, referring to the GREEN signal.

Input Signal	Step	Adjusting Method
Video signal	1	Connect a Video Card to the RGB Assy through a jig cable to measure the RGB Assy. (See "Diagnosis of the Video Card (PDA-5002)" of 7.1.4 DISASSEMBLY.) The signal level cannot be measured without a jig cable. Note: Be careful of the direction of the jig cable connector when connecting.
	2	Input a 525i component signal to INPUT 1 and INPUT 2. Use a signal consisting of the luminance signal only, such as a ramp signal or STEP signal, whose black level (0IRE) and gradation can be checked. Note: You can use a Y (luminance) signal of the standard NTSC component video signal.
	3	In the signal input function (INPUT1 or INPUT2), set the display mode of the VIDEO signal to COMPONENT. MENU → SETUP → VIDEO SIGNAL : COMPONENT
	4	Set the unit to Standby mode then to Factory mode. MENU → SET → POWER ON
	5	Turn the ACL SW setting to OFF. INITIALIZE mode ACL SW : "3" key Select OFF with the right and left keys.
	6	Decrease the MAT CONT adjustment value of OFFSET-RGB1 by 3. OFFSET mode: Select RGB 1 mode with the top and bottom keys. MAT CONT : "1" key Decrease the adjustment value by 3 with the right and left keys.
	7	Decrease the MAT BRIGHT adjustment value of OFFSET-RGB1 by 2. OFFSET mode: Select RGB 1 mode with the top and bottom keys. MAT BRIGHT : "2" key Decrease the adjustment value by 2 with the right and left keys.
	8	Take a trigger of the oscilloscope with HD_PLL (3.3Vp-p) of K4805.
	9	Measure the signal waveform of the Green signal at K4603, and measure the black level (0IRE) and amplitude.
	10	AD R LOW adjustment Measure the black level (0IRE) of the Red signal at K4602, and adjust the level of AD R LOW so that its black level (0IRE) becomes the same as that of the Green signal measured in step 9. Tolerance: $\pm 0.05V$ OFFSET mode: Select RGB 1 mode with the top and bottom keys. AD R LOW : "9" key Adjust with the right and left keys.
	11	AD R HIGH adjustment Measure the signal amplitude of the Red signal at K4602, and adjust the level of AD R HIGH so that its signal amplitude becomes the same as that of the Green signal measured in step 9. Tolerance: $\pm 0.05V$ OFFSET mode: Select RGB 1 mode with the top and bottom keys. AD R HIGH : "6" key Adjust with the right and left keys.
	12	AD B LOW adjustment Measure the black level (0IRE) of the Blue signal at K4604, and adjust the level of AD B LOW so that its black level (0IRE) becomes the same as that of the Green signal measured in step 9. Tolerance: $\pm 0.05V$ OFFSET mode: Select RGB 1 mode with the top and bottom keys. AD B LOW : "11" key Adjust with the right and left keys.
	13	AD B HIGH adjustment Measure the signal amplitude of the Blue signal at K4604, and adjust the level of AD B HIGH so that its signal amplitude becomes the same as that of the Green signal measured in step 9. Tolerance: $\pm 0.05V$ OFFSET mode: Select RGB 1 mode with the top and bottom keys. AD B HIGH : "8" key Adjust with the right and left keys.

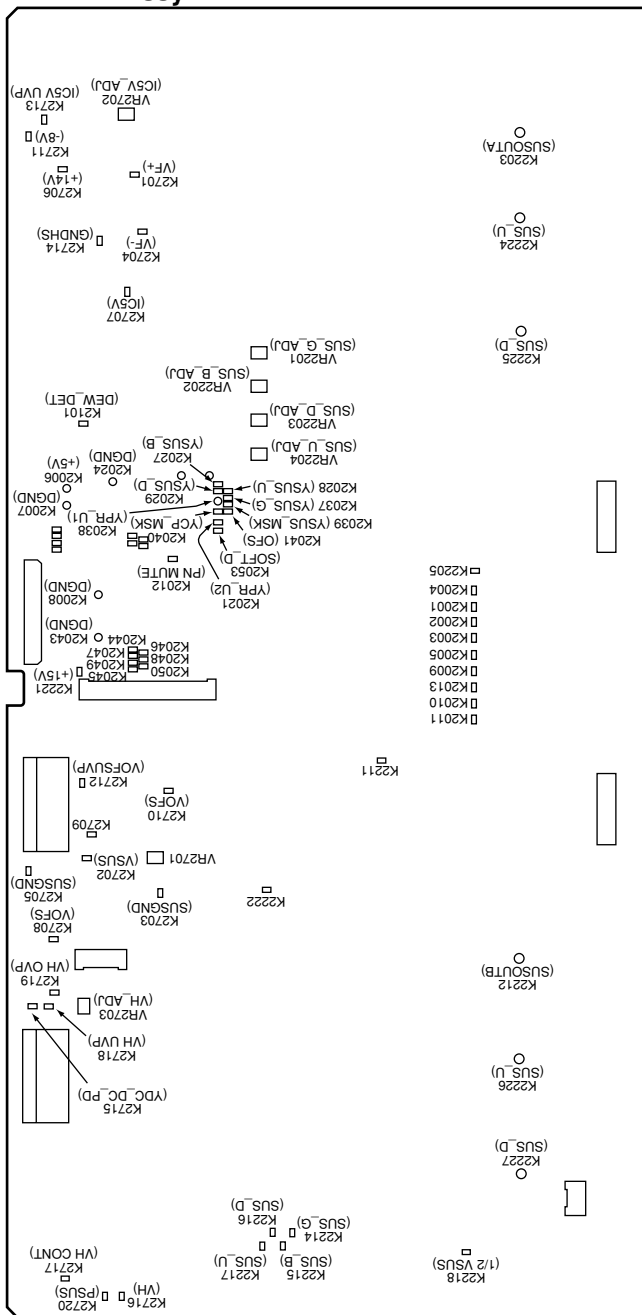
Input Signal	Step	Adjusting Method
Video signal		<p>● Adjust the black level of the Red and Blue signals referring to that of the Green signal</p> <p>● Adjust the signal amplitude of the Red and Blue signals referring to that of the Green signal</p> 
	14	<p>Increase the MAT CONT adjustment value of OFFSET-RGB1 by 3. OFFSET mode: Select RGB 1 mode with the top and bottom keys. MAT CONT : "1" key Increase the adjustment value by 3 with the right and left keys.</p>
	15	<p>Increase the MAT BRIGHT adjustment value of OFFSET-RGB1 by 2. OFFSET mode: Select RGB 1 mode with the top and bottom keys. MAT BRIGHT : "2" key Increase the adjustment value by 2 with the right and left keys.</p>
	16	<p>Turn the ACL SW setting to ON. INITIALIZE mode ACL SW : "3" key Select ON with the right and left keys.</p>
RGB (PC) signal	1	<p>Input a RGB (PC) signal to the INPUT1 or INPUT2. Use a signal consisting of the luminance signal only, such as a ramp signal or STEP signal, whose black level (0IRE) and gradation can be checked. • Recommended signal: VESA VGA@60Hz</p>
	2	<p>Set the unit to Standby mode then to Factory mode. MENU → SET → POWER ON</p>
	3	<p>Take a trigger of the oscilloscope with HD_PLL (3.3Vp-p) of K4805.</p>
	4	<p>Measure the signal waveform of the Green signal at K4603, and measure the black level (0IRE) and amplitude.</p>
	5	<p>AD R LOW adjustment Measure the black level (0IRE) of the Red signal at K4602, and adjust the level of AD R LOW so that its black level (0IRE) becomes the same as that of the Green signal measured in step 9. Tolerance: $\pm 0.05V$ OFFSET mode: Select RGB 1 mode with the top and bottom keys. AD R LOW : "9" key Adjust with the right and left keys.</p>
	6	<p>AD R HIGH adjustment Measure the signal amplitude of the Red signal at K4602, and adjust the level of AD R HIGH so that its signal amplitude becomes the same as that of the Green signal measured in step 9. Tolerance: $\pm 0.05V$ OFFSET mode: Select RGB 1 mode with the top and bottom keys. AD R HIGH : "6" key Adjust with the right and left keys.</p>

Input Signal	Step	Adjusting Method
RGB (PC) signal	7	AD B LOW adjustment Measure the black level (0IRE) of the Blue signal at K4604, and adjust the level of AD B LOW so that its black level (0IRE) become the same as that of the Green signal measured in step 9. Tolerance: $\pm 0.05V$ OFFSET mode: Select RGB 1 mode with the top and bottom keys. AD B LOW : "11" key Adjust with the right and left keys.
	8	AD B HIGH adjustment Measure the signal amplitude of the Blue signal at K4604, and adjust the level of AD B HIGH so that its signal amplitude become the same as that of the Green signal measured in step 9. Tolerance: $\pm 0.05V$ OFFSET mode: Select RGB 1 mode with the top and bottom keys. AD R LOW : "8" key Adjust with the right and left keys.
		<div> <p>● Adjust the black level of the Red and Blue signals referring to that of the Green signal</p> </div> <div> <p>● Adjust the signal amplitude of the Red and Blue signals referring to that of the Green signal</p> </div>

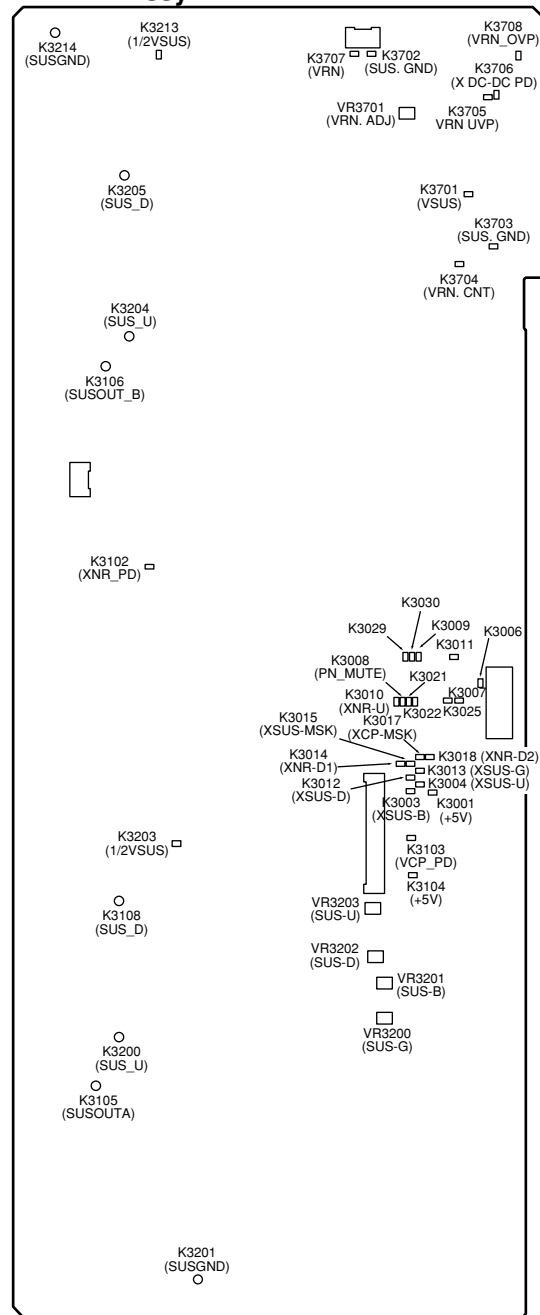
Color-Balance Adjustment

Input Signal	Adjusting Point	Adjusting Method																																											
Flesh color	REFERENCE1 mode in Factory mode COLOR : "3" key TINT : "4" key	Color-Balance Adjustment After adjusting the white balance, check the flesh color of figures in LD still pictures. If the color is not natural, adjust it with the keys on the remote control unit.																																											
		Reference: Adjustment values when using the Minolta color-difference meter <table><tr><td></td><td></td><td></td><td>NTSC</td><td>HD</td><td>PC</td></tr><tr><td rowspan="6">White Balance</td><td rowspan="3">20% window-step signal (-3dB)</td><td>x</td><td>298</td><td>299</td><td>302</td></tr><tr><td>y</td><td>307</td><td>315</td><td>308</td></tr><tr><td>Y</td><td>6.6</td><td>5.7</td><td>2.9</td></tr><tr><td rowspan="3">80% window-step signal (-3dB)</td><td>x</td><td>293</td><td>292</td><td>297</td></tr><tr><td>y</td><td>309</td><td>312</td><td>319</td></tr><tr><td>Y</td><td>135</td><td>148</td><td>66.2</td></tr><tr><td rowspan="2">Flesh Color</td><td rowspan="2">Window chroma signal</td><td>x</td><td>430</td><td>427</td><td>—</td></tr><tr><td>y</td><td>365</td><td>362</td><td>—</td></tr></table>				NTSC	HD	PC	White Balance	20% window-step signal (-3dB)	x	298	299	302	y	307	315	308	Y	6.6	5.7	2.9	80% window-step signal (-3dB)	x	293	292	297	y	309	312	319	Y	135	148	66.2	Flesh Color	Window chroma signal	x	430	427	—	y	365	362	—
			NTSC	HD	PC																																								
White Balance	20% window-step signal (-3dB)	x	298	299	302																																								
		y	307	315	308																																								
		Y	6.6	5.7	2.9																																								
	80% window-step signal (-3dB)	x	293	292	297																																								
		y	309	312	319																																								
		Y	135	148	66.2																																								
Flesh Color	Window chroma signal	x	430	427	—																																								
		y	365	362	—																																								

Y DRIVE Assy



X DRIVE Assy



Adjusting Points

6.4 COMMAND

6.4.1 RS-232C COMMANDS (for adjustment)

	Command	Name	Function	RS-232C Factory	RS-232C Integrator	Normal Validity	Direct Validity	UP/DOWN Validity
A	ABL	ABL	ABL level adjustment	0	—	—	0	0
B	BRT	BRIGHT	Brightness adjustment	0	0	—	0	0
	BHI	B HIGH	B HIGH adjustment	0	0	—	0	0
	BLW	B LOW	B LOW adjustment	0	0	—	0	0
	BSL	B SIDE MASK LEVEL	B SIDE MASK LEVEL adjustment	0	0	—	0	0
	BHA	AD B HIGH	AD B HIGH adjustment	0	—	—	0	0
	BLA	AD B LOW	AD B LOW adjustment	0	—	—	0	0
C	CNT	CONTRAST	Contrast adjustment	0	0	—	0	0
	COL	COLOR	Color adjustment	0	0	—	0	0
	CDR	CDR OFFSET	CDR OFFSET adjustment	0	—	—	0	0
	CDB	CDB OFFSET	CDB OFFSET adjustment	0	—	—	0	0
	CTI	CD TINT	Chroma decode TINT adjustment	0	—	—	0	0
	CPH	CLOCK PHASE	PLL phase adjustment	0	0	—	0	0
	CFR	CLOCK FREQUENCY	PLL frequency adjustment	0	0	—	0	0
D	DW0	DOWN 10	To decrease the adjustment value by 10	0	0	0	—	—
	DWn	DOWN n	To decrease the adjustment value by n (n = 1, 2,...8, 9)	0	0	0	—	—
	DWF	DOWN FULL	To decrease the adjustment value to the minimum	0	0	0	—	—
G	GHI	G HIGH	G HIGH adjustment	0	0	—	0	0
	GLW	G LOW	G LOW adjustment	0	0	—	0	0
	GSL	G SIDE MASK LEVEL	G SIDE MASK LEVEL adjustment	0	0	—	0	0
	GHA	AD G HIGH	AD G HIGH adjustment	0	—	—	0	0
	GLA	AD G LOW	AD G LOW adjustment	0	—	—	0	0
L	LRY	R-Y LEVEL	R-Y level adjustment	0	—	—	0	0
	LBV	B-Y LEVEL	B-Y level adjustment	0	—	—	0	0
M	MCT	MAT CONTRAST	MAT CONTRAST adjustment	0	—	—	0	0
	MBR	MAT BRIGHT	MAT BRIGHT adjustment	0	—	—	0	0
	MCL	MAT COLOR	MAT COLOR adjustment	0	—	—	0	0
	MTI	MAT TINT	MAT TINT adjustment	0	—	—	0	0
	MCA	AD MAIN CONTRAST	AD MAIN CONTRAST adjustment	0	—	—	0	0
P	PBH	PANEL BLUE HIGH	BLUE HIGH-LIGHT adjustment	0	—	—	0	0
	PBL	PANEL BLUE LOW	BLUE LOW-LIGHT adjustment	0	—	—	0	0
	PGH	PANEL GREEN HIGH	GREEN HIGH-LIGHT adjustment	0	—	—	0	0
	PGL	PANEL GREEN LOW	GREEN LOW-LIGHT adjustment	0	—	—	0	0
	PRH	PANEL RED HIGH	RED HIGH-LIGHT adjustment	0	—	—	0	0
	PRL	PANEL RED LOW	RED LOW-LIGHT adjustment	0	—	—	0	0
R	RHI	R HIGH	R HIGH adjustment	0	0	—	0	0
	RLW	R LOW	R LOW adjustment	0	0	—	0	0
	RSL	R SIDE MASK LEVEL	R SIDE MASK LEVEL adjustment	0	0	—	0	0
	RHA	AD R HIGH	AD R HIGH adjustment	0	—	—	0	0
	RLA	AD R LOW	AD R LOW adjustment	0	—	—	0	0
S	SV1	SUB VOLUME INPUT1	To adjust the sub-volume of INPUT1	0	0	—	0	0
	SV2	SUB VOLUME INPUT2	To adjust the sub-volume of INPUT2	0	0	—	0	0
	SV3	SUB VOLUME INPUT3	To adjust the sub-volume of INPUT3	0	0	—	0	0
	SV4	SUB VOLUME INPUT4	To adjust the sub-volume of INPUT4	0	0	—	0	0
	SV5	SUB VOLUME INPUT5	To adjust the sub-volume of INPUT5	0	0	—	0	0
	SHP	H.SHARP	H.SHARP/H.ENHANCE adjustment	0	0	—	0	0
	SHV	V.SHARP	V.SHARP/V.ENHANCE adjustment	0	0	—	0	0
T	TNT	TINT	TINT adjustment	0	0	—	0	0
U	UP0	UP10	To increase the adjustment value by 10	0	0	0	—	—
	UPn	UPn	To increase the adjustment value by n (n = 1,2,...8,9)	0	0	0	—	—
	UPF	UP FULL	To increase the adjustment value to the maximum	0	0	0	—	—
V	VOF	VOFFSET ADJUST	Vofs adjustment	0	—	—	0	0
	VOL	VOLUME	Audio volume adjustment	0	0	0	0	0
	VSU	VSUS ADJUST	Vsus adjustment	0	—	—	0	0
	VPS	VERTICAL POSITION	Vertical position adjustment	0	0	—	0	0
	VSI	VERTICAL SIZE	Vertical size adjustment	0	0	—	0	0
X	XSB	XSUS B	X-SUS-B pulse adjustment	0	—	—	0	0
	XSG	XSUS G	X-SUS-G pulse adjustment	0	—	—	0	0
Y	YSB	YSUS B	Y-SUS-B pulse adjustment	0	—	—	0	0
	YSG	YSUS G	Y-SUS-G pulse adjustment	0	—	—	0	0
	YDL	Y-DELAY	Y-DELAY adjustment	0	—	—	0	0
	YOL	Y-OUT LEVEL	Y-OUT LEVEL adjustment	0	—	—	0	0

6.4.2 RS-232C COMMANDS (for setting)

	Command	Name	Function	RS-232C Factory	RS-232C Integrator	Normal Validity	Direct Validity	UP/DOWN Validity
A	AJN	ADJUST NO	To exit from the RS-232C Integrator mode	–	O	–	–	–
	AJY	ADJUST YES	To enter the RS-232C Integrator mode	–	–	O	–	–
	AMN	AUDIO MUTE NO	To turn the audio mute to OFF	O	O	O	–	–
	AMY	AUDIO MUTE YES	To turn the audio mute to ON	O	O	O	–	–
	AB0	ABL MODE0	To set the ABL setting to MODE0 (REFERENCE)	O	–	–	–	–
	AB1	ABL MODE1	To set the ABL setting to MODE1 (PC)	O	–	–	–	–
	AB2	ABL MODE2	To set the ABL setting to MODE2 (VIDEO60Hz)	O	–	–	–	–
B	AB3	ABL MODE3	To set the ABL setting to MODE3 (VIDEO50Hz)	O	–	–	–	–
	BBY	VIDEO RGB YES	To set the signal format to VIDEO RGB	O	O	–	–	–
	BR1	BAUD RATE1	To set the RS-232C baud rate to 1200BPS	O	O	–	–	–
	BR2	BAUD RATE2	To set the RS-232C baud rate to 2400BPS	O	O	–	–	–
	BR3	BAUD RATE3	To set the RS-232C baud rate to 4800BPS	O	O	–	–	–
	BR4	BAUD RATE4	To set the RS-232C baud rate to 9600BPS	O	O	–	–	–
	BR5	BAUD RATE5	To set the RS-232C baud rate to 19200BPS	O	O	–	–	–
C	BR6	BAUD RATE6	To set the RS-232C baud rate to 38400BPS	O	O	–	–	–
	CM1	COLOR MODE 1	To set to COLOR MODE 1	O	O	O	–	–
	CM2	COLOR MODE 2	To set to COLOR MODE 2	O	O	O	–	–
	CP1	VIDEO COMPONENT1 YES	To set the signal format to VIDEO COMPONENT1	O	O	–	–	–
	CP2	VIDEO COMPONENT2 YES	To set the signal format to VIDEO COMPONENT2	O	O	–	–	–
	CDE	COLOR DETECT EURO	To set the color detect to EURO	O	O	–	–	–
	CDM	COLOR DETECT ALL	To set the color detect to ALL	O	O	–	–	–
D	CDA	COLOR DETECT SA	To set the color detect to SA	O	O	–	–	–
	CT1	COLOR TEMP.1	To set the color temperature to -3000K or equivalent	O	O	–	–	–
	CT2	COLOR TEMP.2	To set the color temperature to -2000K or equivalent	O	O	–	–	–
	CT3	COLOR TEMP.3	To set the color temperature to ±0K or equivalent	O	O	–	–	–
	CT4	COLOR TEMP.4	To set the color temperature to +1000K or equivalent	O	O	–	–	–
	CT5	COLOR TEMP.5	To set the color temperature to +2000K or equivalent	O	O	–	–	–
	CL1	CLAMP MODE1	To set the clamp position to AUTO	O	O	–	–	–
E	CL2	CLAMP MODE2	To set the clamp position to fix	O	O	–	–	–
	DIN	OSD DISPLAY NO	To prohibit OSD display	O	O	O	–	–
	DIY	OSD DISPLAY YES	To permit OSD display	O	O	O	–	–
	DOF	DISPLAY OFF	To turn the OSD display to OFF	O	O	O	–	–
	DRN	DRIVE ON	To turn the drive to ON	It is valid in the RS-232C factory and STB			–	–
	DRF	DRIVE OFF	To turn the drive to OFF				–	–
	DSP	INPUT SIGNAL DISPLAY	To display current input signal information	O	O	–	–	–
F	DS2	DISPLAY2	To display current various information	O	O	–	–	–
	EWY	EEPROM WRITE YES	To enter Plug & Play EEPROM writing mode	O	–	–	–	–
	EWN	EEPROM WRITE NO	To exit from Plug & Play EEPROM writing mode	O	–	–	–	–
	FAN	FACTORY ADJUST NO	To exit from Factory adjustment mode	O	–	–	–	–
	FAY	FACTORY ADJUST YES	To enter Factory adjustment mode	–	–	O	–	–
	FST	FINAL SET UP	To reset various settings to the factory-preset values	O	–	–	–	–
	FRP	FRESH POSITION	To initialize SCREEN value of integrator	O	O	–	–	–
G	FCA	FAN CONTROL AUTO	To set the fan roll control to AUTO	O	O	–	–	–
	FCM	FAN CONTROL MAX	To set the fan roll control to MAX	O	O	–	–	–
	FMY	FULL MASK YES	To set to FULL MASK (white)	–	O	–	–	–
	FMR	FULL MASK RED	To set to FULL MASK (red)	–	O	–	–	–
	FMG	FULL MASK GREN	To set to FULL MASK (green)	–	O	–	–	–
	FMB	FULL MASK BLUE	To set to FULL MASK (blue)	–	O	–	–	–
	FMN	FULL MASK NO	To release the FULL MASK	–	O	–	–	–
H	FXO	FIX OUTPUT	To fix the audio output	O	O	–	–	–
	F50	FREE RUN 50Hz	To set the free-running to 50Hz in the MASK setting	O	–	–	–	–
	F60	FREE RUN 60Hz	To set the free-running to 60Hz in the MASK setting	O	–	–	–	–
	F70	FREE RUN 70Hz	To set the free-running to 70Hz in the MASK setting	O	–	–	–	–
	GAJ	GET ADJUST	To obtain various adjustment values of the display from EEPROM	O	–	–	–	–
	GPW	GET PANEL W/B	To obtain the panel W/B information from EEPROM	O	–	–	–	–
	GS1	GET STATUS 1	To obtain the version information of microcomputer from	O	–	–	–	–
I	GS2	GET STATUS 2	To obtain the PD information and temperature information from EEPROM	O	–	–	–	–
	GPS	GET POSITION DATA	TxD outputs of the positioning data	O	O	O	–	–
	GSO	GET STATUS OPTION	TxD outputs of data on various OPTION settings	O	O	O	–	–
	GSS	GET STATUS SET UP	TxD outputs of data on various SETUP settings	O	O	O	–	–
	GAS	GET ADJUST SLOT	TxD outputs of data of picture quality setting of SLOT	O	–	–	–	–
	GAR	GET ADJUST RGB	TxD outputs of data of picture quality adjustment (RGB 1)	O	–	–	–	–

	Command	Name	Function	RS-232C Factory	RS-232C Integrator	Normal Validity	Direct Validity	UP/DOWN Validity
G	GWB	GET WHITE BALANCE	TxD outputs of data of picture quality setting of RGB1	O	O	O	–	–
	GPD	GET POWER DOWN	TxD outputs of POWER DOWN information	O	–	–	–	–
H	HCN	HIGH CONTRAST NO	To turn the high contrast setting to OFF	O	O	–	–	–
	HCY	HIGH CONTRAST YES	To turn the high contrast setting to ON	O	O	–	–	–
	HMS	HOURLY METER SET	To set the hour meter to optional time	O	–	–	O	–
	HMD	HOURLY METER DISP.	To display the hour meter	O	O	–	–	–
	H80	HDTV MODE 1080 i	To set the HDTV mode to 1080 i	O	O	–	–	–
	H35	HDTV MODE 1035 i	To set the HDTV mode to 1035 i	O	O	–	–	–
I	IN1	INPUT1	To select INPUT1	O	O	O	–	–
	IN2	INPUT2	To select INPUT2	O	O	O	–	–
	IN3	INPUT3	To select INPUT3	O	O	O	–	–
	IN4	INPUT4	To select INPUT4	O	O	O	–	–
	IN5	INPUT5	To select INPUT5	O	O	O	–	–
	IMN	INTEGRATOR MODE NO	To set the Integrator mode to LOCK	O	–	–	–	–
	IMY	INTEGRATOR MODE YES	To set the Integrator mode to UNLOCK	O	–	–	–	–
	IDC	ID CLEAR	To clear the ID	O	O	–	–	–
	IDS	ID SET	To set the ID	O	O	–	O	–
K	KLN	KEY LOCK NO	To permit main unit key / remote control unit operation	O	O	–	–	–
	KLY	KEY LOCK YES	To prohibit main unit key / remote control unit operation	O	O	–	–	–
M	M00	MASK 00	Mask mode OFF	O	–	–	–	–
	M01	MASK 01	Pattern 1 (ramp)	O	–	–	–	–
	M02	MASK 02	Pattern 2 (color bars)	O	–	–	–	–
	M03	MASK 03	Pattern 3 (slanting lines)	O	–	–	–	–
	M04	MASK 04	Pattern 4 (for W/B measurement)	O	–	–	–	–
	M05	MASK 05	Pattern 5 (for W/B adjustment)	O	–	–	–	–
	M06	MASK 06	Pattern 6 (for W/B peak measurement)	O	–	–	–	–
	M07	MASK 07	Pattern 7 (for peak measurement)	O	–	–	–	–
	M08	MASK 08	Pattern 8 (reservation)	O	–	–	–	–
	M09	MASK 09	Pattern 9 (for SCAN IC protection test)	O	–	–	–	–
	M10	MASK 10	Pattern 10 (for SCAN IC protection test)	O	–	–	–	–
	M11	MASK 11	Pattern 11 (reservation)	O	–	–	–	–
	M12	MASK 12	Pattern 12 (reservation)	O	–	–	–	–
	M13	MASK 13	Pattern 13 (reservation)	O	–	–	–	–
	M14	MASK 14	Pattern 14 (reservation)	O	–	–	–	–
	M51	MASK 51	Full mask (white)	O	–	–	–	–
	M52	MASK 52	Full mask (cyan 274)	O	–	–	–	–
	M53	MASK 53	Full mask (magenta 135)	O	–	–	–	–
	M54	MASK 54	Full mask (flesh color)	O	–	–	–	–
	M55	MASK 55	Full mask (cyan 1023)	O	–	–	–	–
	M56	MASK 56	Full mask (light purple 5)	O	–	–	–	–
	M57	MASK 57	Full mask (sky blue)	O	–	–	–	–
	M58	MASK 58	Full mask (red)	O	–	–	–	–
	M59	MASK 59	Full mask (green)	O	–	–	–	–
	M60	MASK 60	Full mask (blue)	O	–	–	–	–
	M61	MASK 61	Full mask (black)	O	–	–	–	–
	M62	MASK 62	Full mask (reservation)	O	–	–	–	–
	M63	MASK 63	Full mask (reservation)	O	–	–	–	–
	M64	MASK 64	Full mask (reservation)	O	–	–	–	–
	M65	MASK 65	Full mask (reservation)	O	–	–	–	–
	M66	MASK 66	Full mask (reservation)	O	–	–	–	–
	MG1	2X2MODE LEFT UPPER	Four enlarged setting: Upper left	O	O	–	–	–
	MG2	2X2MODE LEFT LOWER	Four enlarged setting: Lower left	O	O	–	–	–
	MG3	2X2MODE RIGHT UPPER	Four enlarged setting: Upper right	O	O	–	–	–
	MG4	2X2MODE RIGHT LOWER	Four enlarged setting: Lower right	O	O	–	–	–
	MGY	2X2MODE YES	To turn the four sides multi to ON	O	O	O	–	–
	MGN	2X2MODE NO	To turn the four sides multi to OFF	O	O	O	–	–
	MMN	MIRROR MODE NO	To turn the mirror mode to OFF (normal display)	O	O	O	–	–
	MMX	MIRROR MODE X	Right and left reversing display	O	O	O	–	–
	MMY	MIRROR MODE Y	Top and bottom reversing display	O	O	O	–	–
	MMZ	MIRROR MODE XY	Top/bottom and right/left reversing display	O	O	O	–	–
	MTN	VIDEO MUTE NO	To turn the video mute of IC30 to OFF	O	O	O	–	–
	MTY	VIDEO MUTE YES	To turn the video mute of IC30 to ON	O	O	O	–	–

	Command	Name	Function	RS-232C Factory	RS-232C Integrator	Normal Validity	Direct Validity	UP/DOWN Validity
A	M	MCY	MASK CONTROL YES	To permit automatic mask display position setting	0	0	–	–
		MCN	MASK CONTROL NO	To release automatic mask display position setting	0	0	–	–
B	N	NMY	NEGATIVE MODE YES	To turn the inverse mode (negative positive inverting) to ON	0	0	–	–
		NMN	NEGATIVE MODE NO	To turn the inverse mode (negative positive inverting) to OFF	0	0	–	–
		NTS	COLOR SYSTEM NTSC	To set the COLOR SYSTEM setting to NTSC	0	0	–	–
		NT4	COLOR SYSTEM 4.43NTSC	To set the COLOR SYSTEM setting to 4.43NTSC	0	0	–	–
		NRN	DIGITAL NR OFF	To set the DIGITAL NR setting to OFF	0	0	–	–
		NRL	DIGITAL NR LOW	To set the DIGITAL NR setting to LOW	0	0	–	–
		NRM	DIGITAL NR MIDDLE	To set the DIGITAL NR setting to MIDDLE	0	0	–	–
		NRH	DIGITAL NR HIGH	To set the DIGITAL NR setting to HIGH	0	0	–	–
	O	OFY	OFFSET YES	To set the OFFSET adjustment mode to ON	0	–	–	–
C		OCY	FIELD OFFSET CHANGE YES	To set the field AB offset to ON	0	–	–	–
		OCN	FIELD OFFSET CHANGE NO	To set the field AB offset to OFF	0	–	–	–
		OMY	ORBITER MODE YES	To set the orbiter mode to ON	0	0	–	–
		OMN	ORBITER MODE NO	To set the orbiter mode to OFF	0	0	–	–
D	P	PAF	ACL SW OFF	To set the ACL SW to OFF	0	–	–	–
		PAL	COLOR SYSTEM PAL	To set the COLOR SYSTEM setting to PAL	0	0	–	–
		PAN	ACL SW ON	To set the ACL SW to ON	0	–	–	–
		PCA	PC AUTO	To set the INPUT setting to PC AUTO (auto)	0	0	–	–
		PCY	PC RGB YES	To set the INPUT setting to PC: RGB (VGA or XGA)	0	0	–	–
		PWY	PC WIDE YES	To set the INPUT setting to PC: RGB (WVGA or WXGA)	0	0	–	–
		PLN	BRIGHT ENHANCE OFF	To set the center brightness correction function to OFF	0	0	–	–
		PLY	BRIGHT ENHANCE ON	To set the center brightness correction function to ON	0	0	–	–
		PMS	PULSE METER SET	To set the pulse meter	0	–	0	–
		PMD	PULSE METER DISP	To display the pulse meter	0	–	–	–
		PMY	COLOR SYSTEM PAL-M	To set the COLOR SYSTEM setting to PAL-M	0	0	–	–
		PNY	COLOR SYSTEM PAL-N	To set the COLOR SYSTEM setting to PAL-N	0	0	–	–
		PON	POWER ON	Power ON	–	–	0	–
		POF	POWER OFF	Power OFF	0	0	0	–
		PT0	PANEL COLOR TEMP0	Panel color temperature 0 (REFERENCE value)	0	–	–	–
		PT1	PANEL COLOR TEMP1	Panel color temperature 1	0	–	–	–
		PT2	PANEL COLOR TEMP2	Panel color temperature 2	0	–	–	–
		PSN	AUTO POWER OFF OFF POWER MANAGEMENT	To set the AUTO POWER OFF / POWER MANAGEMENT setting to OFF	0	0	–	–
		PS1	AUTO POWER OFF ON	To set the AUTO POWER OFF setting to ON	0	0	–	–
		PS2	POWER MANAGEMENT ON	To set the POWER MANAGEMENT setting to ON	0	0	–	–
		PUN	PURECINEMA OFF	To set the PURECINEMA to OFF	0	0	–	–
		PUS	PURECINEMA STANDARD	To set the PURECINEMA to STANDARD	0	0	–	–
		PUH	PURECINEMA HQ	To set the PURECINEMA to HQ (HIGH QUALITY)	0	0	–	–
		PWN	POWER CONTROL STANDARD	To set the power control to OFF (STANDARD mode)	0	0	–	–
		PWL	CONTROL MODE1	To set the power control to MODE1 (Power-saving mode)	0	0	–	–
		PWS	POWER CONTROL MODE2	To set the power control to MODE2 (Longevity life mode)	0	0	–	–
		PDF	PICTURE DEFAULT	To execute PICTURE DEFAULT	0	–	–	–
	R	RFY	REFERENCE YES	To enter reference adjustment mode	0	–	–	–
E	S	SCM	COLOR SYSTEM SECAM	To set the COLOR SYSTEM setting to SECAM	0	0	–	–
		STD	STANDARD W/B	To reset the PIC and W/B of integrator to factory default values	–	0	–	–
		SM0	SCREEN MODE 0	To set the screen size to DOT BY DOT	0	0	0	–
		SM1	SCREEN MODE 1	To set the screen size to 4:3	0	0	0	–
		SM2	SCREEN MODE 2	To set the screen size to FULL	0	0	0	–
		SM3	SCREEN MODE 3	To set the screen size to ZOOM	0	0	0	–
		SM5	SCREEN MODE 5	To set the screen size to WIDE	0	0	0	–
		SLY	STILL YES	To set the STILL setting to ON	0	0	0	–
F		SLN	STILL NO	To set the STILL setting to OFF	0	0	0	–
	T	TVA	COLOR SYSTEM AUTO	To set the COLOR SYSTEM setting to AUTO	0	0	–	–
	V	VFY	VIDEO FULL DISPLAY YES	To start 100% display	–	–	0	–
		VFN	VIDEO FULL DISPLAY NO	To finish 100% display	–	–	0	–
		VRO	VARIABLE OUTPUT	To set the audio output to variable	0	0	–	–
	Y	YCM	3S Y/C MOTION	To set the 3D Y/C setting to MOTION	0	0	–	–
		YCS	3D Y/C STILL	To set the 3D Y/C setting to STILL	0	0	–	–

6.4.3 GET COMMAND

● Command Description

Command	Function
GAJ	Outputting data for electronic-control-adjustment values and drive-system-adjustment values
GPW	Outputting data related to the white-balance adjustment for the panel
GS1	Outputting data such as version information, and data from the hour meter and pulse meter
GS2	Outputting data for power down, temperature and condensation information
GAS	Outputting data related to the picture quality setting of SLOT
GAR	Outputting data related to the picture quality (RGB1 of the Factory menu)
GPD	Outputting data on PD information of Service Factory menu (past eight times)
GPS	Outputting data related to SCREEN adjustment data
GSD	Outputting TxD data on SD information of Service Factory menu
GWB	Outputting data related to picture quality / white balance
GSS	Outputting data on SETUP items of menu mode / Integrator menu
GSO	Outputting data on OPTION items of menu mode / Integrator menu

GAJ: Outputting data for electronic-control-adjustment values and drive-system-adjustment values

- Data are output according to the transmission order and size of the table below.
- This command is invalid in modes other than RS-232C Factory Adjustment mode.

Order	Data Contents	Size	Remarks
1	Setting mode of electric power upper limit value	3 byte	AB* (*: 0 to 3)
2	Electric power upper limit value (ABL)	(Reference data)	3 byte
3		(Offset data)	3 byte (Note 1)
4	Vsus adjustment value	(Reference data)	3 byte
5	Vofs adjustment value	(Reference data)	3 byte
6	V-SUS-B adjustment value	(Reference data)	3 byte
7	V-SUS-G adjustment value	(Reference data)	3 byte
8	Y-SUS-B adjustment value	(Reference data)	3 byte
9	Y-SUS-G adjustment value	(Reference data)	3 byte

(Note 1) : If data are output when the Reference mode is selected, the same data as the reference data are output as the offset data.

GPW (Get Panel White balance): Outputting data related to the white-balance adjustment for the panel

- Data are output according to the transmission order and size of the table below.
- This command is invalid in modes other than the RS-232C Factory Adjustment mode.

Order	Data Contents	Size	Remarks
1	Panel color temperature mode	3 byte	PT* (*: 0 to 3)
2	Gain of W/B adjustment value Red	(Reference data)	3 byte
3		(Offset data)	3 byte (Note 1)
4	Gain of W/B adjustment value Green	(Reference data)	3 byte
5		(Offset data)	3 byte (Note 1)
6	Gain of W/B adjustment value Blue	(Reference data)	3 byte
7		(Offset data)	3 byte (Note 1)
8	Offset of W/B adjustment value Red	(Reference data)	3 byte
9		(Offset data)	3 byte (Note 1)
10	Offset of W/B adjustment value Green	(Reference data)	3 byte
11		(Offset data)	3 byte (Note 1)
12	Offset of W/B adjustment value Blue	(Reference data)	3 byte
13		(Offset data)	3 byte (Note 1)

(Note 1) : If data are output when the Reference mode is selected, the same data as the reference data are output as the offset data.

GS1: Outputting data such as version information, and data from the hour meter and pulse meter

- Data are output according to the transmission order and size of the table below.
- This command is invalid in modes other than RS-232C Factory Adjustment mode.

Order	Data Contents	Size	Remarks
1	Display information	3 byte	See below
2	Module microcomputer model number	4 byte	5691 or F691
3	Module microcomputer version	3 byte	
4	Panel microcomputer version	3 byte	
5	Panel /FLASH ROM version	3 byte	
6	Hour meter (hour)	5 byte	Unit: H (hour)
7	Pulse meter	7 byte	Unit: 0.01G (10,000,000)
8	Main microcomputer model number	4 byte	5692 or F692
9	Main microcomputer version	3 byte	
10	Wide microcomputer version	3 byte	
11	Wide /FLASH ROM version	3 byte	

■ Display Information

Data	Model
MX5	PDP-503MX (initial value)
MX4	PDP-433MX
MD5	Module 50 inches
MD4	Module 43 inches
HD5	PDP-503HD
HD4	PDP-433HD

GS2: Outputting data for power down, temperature and condensation information

- Data are output according to the transmission order and size in the table below.
- This command is valid only in the following cases: in RS-232C Factory adjustment mode, during power-down or shutdown, and for 30 seconds until a shutdown occurs because of condensation formed inside the unit or audio failure.

Note: During power-down, when a failure occurs, or for 30 seconds until a shutdown occurs, data can be obtained by directly executing "GS2" without executing "FAY." However, the ID must be set beforehand.

Order	Data Contents	Size	Remarks
1	AC information	1 byte	Always 0 (not used)
2	Service parts distinction	1 byte	0: DIGITAL ASSY adjustment done 1: DIGITAL ASSY not adjusted (Service Assy)
3	Hour meter (hour, minute)	7 byte	*****H**M
4	Power-down information	2 byte	1st/2nd (*)
5	Temperature information	3 byte	8 bit
6	Condensation information	1 byte	1: Condensation
7	Panel microcomputer communication	1 byte	1: Communication failure
8	DIGITAL EEPROM communication	1 byte	1: Communication failure
9	DIGITAL EXPANDER communication	1 byte	1: Communication failure
10	Temperature information (TEMP2)	3 byte	8 bit
11	Temperature information (TEMP3)	3 byte	8 bit
12	Module microcomputer communication	1 byte	1: Communication failure
13	Wide microcomputer communication	1 byte	1: Communication failure
14	MAIN IIC	1 byte	1: Communication failure
15	MAIN EEPROM IIC	1 byte	1: Communication failure
16	AUDIO failure	1 byte	1: AUDIO failure
17	FAN failure	1 byte	1: FAN failure

(*) See the table below on contents of PD information.

Data	Power-Down Point
0	None
1	Y-DRIVE
2	Y-DC/DC CONVERTER
3	X-DC/DC CONVERTER
4	X-DRIVE
5	Power supply
6	ADDRESS junction
7	ADDRESS resonance
8	DC/DC CONVERTER (DIGITAL)

GAS (Get Adjust Slot): Outputting data related to the picture quality setting

- Data are output according to the transmission order and size in the table below.
- Data for the SLOT section of the Factory menu are output.
- This command is invalid when the current input function is one other than VIDEO input of the SLOT system.
- This command is invalid when no SLOT is connected or when a SLOT from another vendor is connected.
- This command is invalid in modes other than RS-232C Factory Adjustment mode.

Order	Data Contents		Size	Remarks
1	Y-DELAY	(Reference data)	3 byte	
2		(Offset data)	3 byte	(Note 1)
3	Y-OUT LEVEL	(Reference data)	3 byte	
4		(Offset data)	3 byte	(Note 1)
5	CD TINT	(Reference data)	3 byte	
6		(Offset data)	3 byte	(Note 1)
7	CDR OFFSET	(Reference data)	3 byte	
8		(Offset data)	3 byte	(Note 1)
9	CDB OFFSET	(Reference data)	3 byte	
10		(Offset data)	3 byte	(Note 1)
11	R-Y LEVEL	(Reference data)	3 byte	
12		(Offset data)	3 byte	(Note 1)
13	B-Y LEVEL	(Reference data)	3 byte	
14		(Offset data)	3 byte	(Note 1)

(Note 1) : If data are output when Reference mode is selected, the same data as the reference data are output as the offset data.

GAR: Output data related to the picture quality (RGB1 of the Factory menu)

- Data are output according to the transmission order and size in the table below.
- This command is invalid in modes other than RS-232C Factory Adjustment mode.

Order	Data Contents		Size	Remarks
1	AD MAIN CONT	(Reference data)	3 byte	(Note 1)
2		(Offset data)	3 byte	(Note 1) (Note 2)
3	AD R HIGH	(Reference data)	3 byte	(Note 1)
4		(Offset data)	3 byte	(Note 1) (Note 2)
5	AD G HIGH	(Reference data)	3 byte	(Note 1)
6		(Offset data)	3 byte	(Note 1) (Note 2)
7	AD B HIGH	(Reference data)	3 byte	(Note 1)
8		(Offset data)	3 byte	(Note 1) (Note 2)
9	AD R LOW	(Reference data)	3 byte	(Note 1)
10		(Offset data)	3 byte	(Note 1) (Note 2)
11	AD G LOW	(Reference data)	3 byte	(Note 1)
12		(Offset data)	3 byte	(Note 1) (Note 2)
13	AD B LOW	(Reference data)	3 byte	(Note 1)
14		(Offset data)	3 byte	(Note 1) (Note 2)
15	MAT CONT	(Reference data)	3 byte	(Note 1)
16		(Offset data)	3 byte	(Note 1) (Note 2)
17	MAT BRIGHT	(Reference data)	3 byte	(Note 1)
18		(Offset data)	3 byte	(Note 1) (Note 2)
19	MAT COLOR	(Reference data)	3 byte	(Note 1)
20		(Offset data)	3 byte	(Note 1) (Note 2)
21	MAT TINT	(Reference data)	3 byte	(Note 1)
22		(Offset data)	3 byte	(Note 1) (Note 2)

(Note 1) As for the setting data not related to the current input function/input signal/setting, dummy data are output.

(Note 2) If data are output when the Reference mode is selected, the same data as the reference data are output as the offset data.

GPS: Output data related to SCREEN adjustment data

- Data are output according to the transmission order and size in the table below.
- All data are data of an Integrator area.
- This command is valid only in Normal Operation mode and RS-232C Integrator Adjustment mode.

Order	Data Contents	Size	Remarks
1	H.POSITION	3 byte	
2	V.POSITION	3 byte	
3	CLOCK	3 byte	(Note 1)
4	PHASE	3 byte	(Note 1)
5	V.SIZE	3 byte	

(Note 1) When the current input signal mode is VIDEO or INPUT 5(DVI), dummy data(*) are output as adjustment data.

GPD (Get Power Down), PD (Power Down) : Outputting data on PD INFORMATION of the Service Factory MENU

- The acquired data are output according to the transmission order and size in the table below.
- This command is valid only in RS-232C Factory Adjustment mode and during power-down.

Note: During power-down, data can be obtained by directly executing "GPD" without executing "FAY." However, the ID must be set beforehand.

Order	Data Contents	Size	Remarks
1	The latest "1stPD INFO"	1 byte	(Note 1)
2	The latest "2ndPD INFO"	1 byte	(Note 1)
3	Hour meter information of the latest PD	7 byte	Upper 5byte: HOUR, Lower 2byte: MINUTE
4	Second latest "1st PD INFO"	1 byte	(Note 1)
5	Second latest "2nd PD INFO"	1 byte	(Note 1)
6	Hour meter information of the second latest PD	7 byte	Upper 5byte: HOUR, Lower 2byte: MINUTE
7	Third latest "1st PD INFO"	1 byte	(Note 1)
8	Third latest "2nd PD INFO"	1 byte	(Note 1)
9	Hour meter information of the third latest PD	7 byte	Upper 5byte: HOUR, Lower 2byte: MINUTE
10	Fourth latest "1st PD INFO"	1 byte	(Note 1)
11	Fourth latest "2nd PD INFO"	1 byte	(Note 1)
12	Hour meter information of the fourth latest PD	7 byte	Upper 5byte: HOUR, Lower 2byte: MINUTE
13	Fifth latest "1st PD INFO"	1 byte	(Note 1)
14	Fifth latest "2nd PD INFO"	1 byte	(Note 1)
15	Hour meter information of the fifth latest PD	7 byte	Upper 5byte: HOUR, Lower 2byte: MINUTE
16	Sixth latest "1st PD INFO"	1 byte	(Note 1)
17	Sixth latest "2nd PD INFO"	1 byte	(Note 1)
18	Hour meter information of the sixth latest PD	7 byte	Upper 5byte: HOUR, Lower 2byte: MINUTE
19	Seventh latest "1st PD INFO"	1 byte	(Note 1)
20	Seventh latest "2nd PD INFO"	1 byte	(Note 1)
21	Hour meter information of the seventh latest PD	7 byte	Upper 5byte: HOUR, Lower 2byte: MINUTE
22	Eighth latest "1st PD INFO"	1 byte	(Note 1)
23	Eighth latest "2nd PD INFO"	1 byte	(Note 1)
24	Hour meter information of the eighth latest PD	7 byte	Upper 5byte: HOUR, Lower 2byte: MINUTE

(Note 1) See the table below on PD information

Data	Power Down Point
0	None
1	Y-DRIVE
2	Y-DC/DC CONVERTER
3	X-DC/DC CONVERTER
4	X-DRIVE
5	Power supply
6	ADDRESS junction
7	ADDRESS resonance
8	DC/DC CONVERTER (DIGITAL)

GSD (Get Shut Down) : Outputting TxD data on SD (Shut Down) INFORMATION of Service Factory MENU

- The acquired data are output according to the transmission order and size in the table below.
 - This command is valid only in RS-232C Factory Adjustment mode and during shut down (for 30 seconds until a shutdown occurs or standby).
- Note:** During power-down, data can be obtained by directly executing "GPD" without executing "FAY." However, the ID must be set beforehand.

Table 1: GSD

Order	Data Contents	Size	Remarks
1	The latest "SD INFO"	1 byte	(Note 1)
2	First latest "SD INFO"	1 byte	(Note 1)
3	Second latest "SD INFO"	1 byte	(Note 1)
4	Third latest "SD INFO"	1 byte	(Note 1)
5	Fourth latest "SD INFO"	1 byte	(Note 1)
6	Fifth latest "SD INFO"	1 byte	(Note 1)
7	Sixth latest "SD INFO"	1 byte	(Note 1)
8	Seventh latest "SD INFO"	1 byte	(Note 1)

(Note 1) See the table below on SD information

Table 2: SD contents

GET Data	Shut Down Point
1	Panel microcomputer communication failure
2	Module IIC communication failure
3	Condensation
4	Temperature abnormality
5	FAN abnormality
6	Module microcomputer communication failure
7	Wide microcomputer communication failure
8	Main IIC communication failure
9	AUDIO failure

GWB (Get White Balance): Outputting data related to picture quality / white balance

- Data are output according to the transmission order and size in the table below.
- This command is valid only in Normal Operation mode, RS-232C Integrator Adjustment mode, and RS-232C Factory adjustment mode.
- In Normal Operation mode and RS-232C Integrator Adjustment mode, data for the current signal and color mode of the current input function in the Integrator area are output.
- In RS-232C Factory Adjustment mode, RGB2 data for the Factory mode are output.

Order	Data Contents	Size	Remarks
1	CONTRAST	3 byte	
2		3 byte	(Note 2)
3	BRIGHT	3 byte	
4		3 byte	(Note 2)
5	COLOR	3 byte	(Note 1)
6		3 byte	(Note 2)
7	TINT	3 byte	(Note 1)
8		3 byte	(Note 2)
9	R HIGH	3 byte	
10		3 byte	(Note 2)
11	G HIGH	3 byte	
12		3 byte	(Note 2)
13	B HIGH	3 byte	
14		3 byte	(Note 2)
15	R LOW	3 byte	
16		3 byte	(Note 2)
17	G LOW	3 byte	
18		3 byte	(Note 2)
19	B LOW	3 byte	
20		3 byte	(Note 2)
21	H.ENHANCE (H.SHARP)	3 byte	
22	V.ENHANCE (V.SHARP)	3 byte	

(Note 1) As for the setting data not related to the current input function/input signal/setting, dummy data are output.

(Note 2) If data are output when the Reference mode is selected, the same data as the reference data are output as the offset data.

GSS: Outputting data on SETUP items of the menu mode / Integrator menu

- Data are output according to the transmission order and size in the table below.
- This command is valid only in Normal Operation mode, RS-232C Integrator Adjustment mode, and RS-232C Factory adjustment mode.

Order	Data Contents	Size	Output	Remarks
1	COLOR TEMP	1 byte	1: COLOR TEMP1 2: COLOR TEMP2 3: COLOR TEMP3 4: COLOR TEMP4 5: COLOR TEMP5	(Note 1)
2	DIGITAL NR	1 byte	0: OFF 1: LOW 2: MIDDLE 3: HIGH	(Note 1)
3	HIGH CONTRAST	1 byte	0: OFF, 1: ON	
4	PURECINEMA	3 byte	Same as the RS-232C command	(Note 1)
5	COLOR SYSTEM	3 byte	Same as the RS-232C command	(Note 1)
6	CLAMP	1 byte	1: AUTO 2: LOCKED	(Note 1)
7	3DY/C	1 byte	M: MOTION S: STILL	(Note 1)
8	SETTING/VIDEO SIGNAL	3 byte	Same as the RS-232C command	(Note 1)
9	2X2MODE	1 byte	0: OFF 1 to 4: MG1 to MG4 (See "MAGNIFY")	
10	BRIGHT ENHANCE	1 byte	0: OFF, 1: ON	
11	HDTV MODE	3 byte	Same as the RS-232C command	(Note 1)
12	VIDEO INPUT	1 byte	1: COMPONENT1 2: COMPONENT2	(Note 1)
13	Input function	3 byte	IN*	
14	Screen size	1 byte	0: DOT BY DOT 1: 4:3 (TYPE) 2: FULL (TYPE) 3: ZOOM 5: WIDE 6: 100% display	
15	SUB VOLUME (INPUT1)	2 byte	0 to 60	
16	SUB VOLUME (INPUT2)	2 byte	0 to 60	
17	SUB VOLUME (INPUT3)	2 byte	0 to 60	(Note 1)
18	SUB VOLUME (INPUT4)	2 byte	0 to 60	(Note 1)
19	SUB VOLUME (INPUT5)	2 byte	0 to 60	(Note 1)

(Note 1) As for the setting data not related to the current input function/input signal/setting, dummy data are output.

GSO: Outputting data on OPTION items of the menu mode / Integrator menu

- Data are output according to the transmission order and size in the table below.
- This command is valid only in Normal Operation mode, RS-232C Integrator Adjustment mode, and RS-232C Factory adjustment mode.

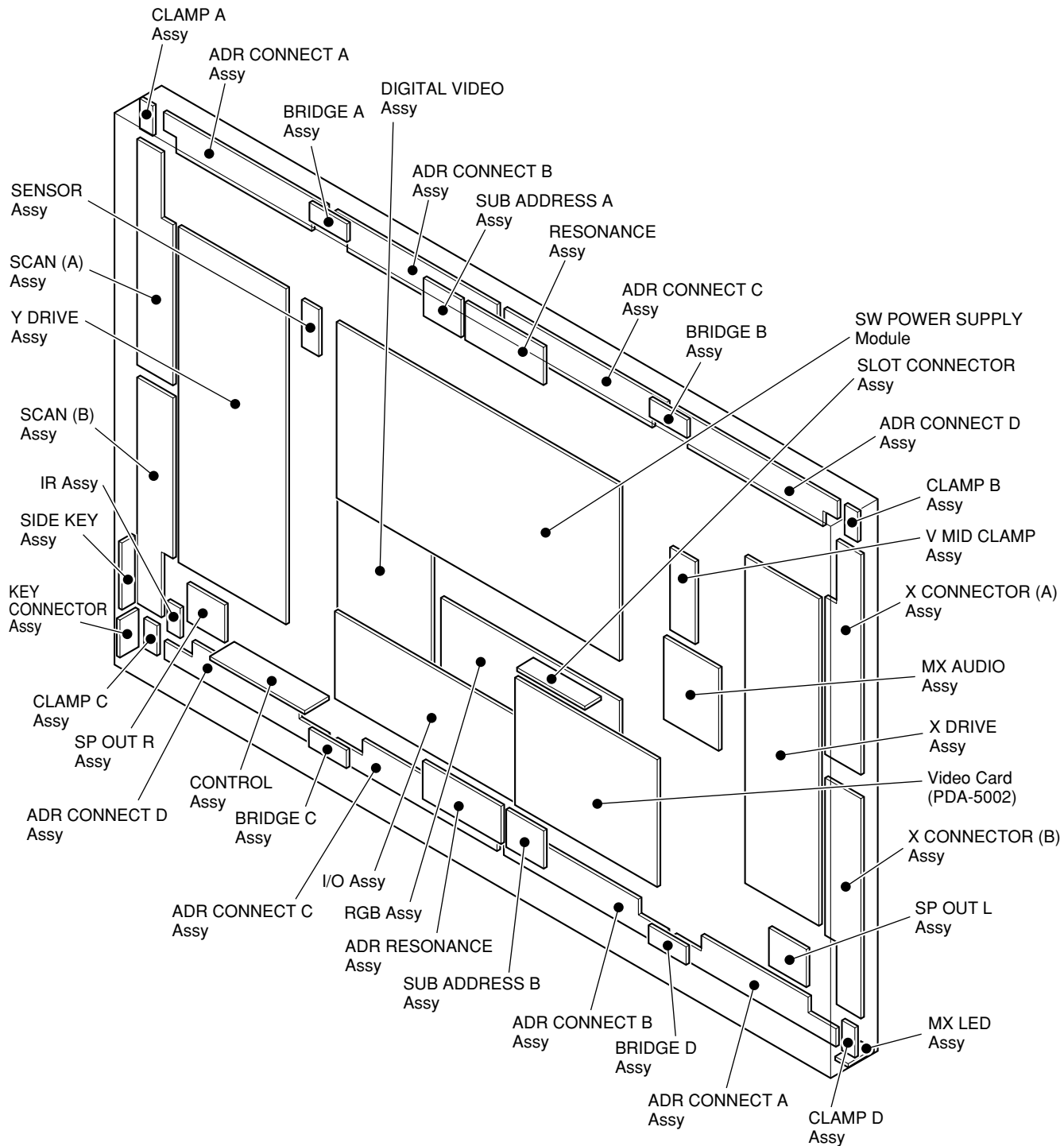
Order	Data Contents	Size	Output	Remarks
1	POWER CONTROL	3 byte	Same as the RS-232C command	
2	OSD display	1 byte	0: OSD display prohibition 1: OSD display permission	
3	FULL MASK	3 byte		Display a RS-232C command of currently set MASK
4	R SIDE MASK LEVEL	3 byte	Adjustment value	
5	G SIDE MASK LEVEL	3 byte	Adjustment value	
6	B SIDE MASK LEVEL	3 byte	Adjustment value	
7	MASK CONTROL	1 byte	0: OFF, 1: ON	
8	ORBITER MODE	1 byte	0: OFF, 1: ON	
9	INVERSE MODE	1 byte	0: OFF, 1: ON	
10	COLOR MODE	1 byte	1: COLOR MODE1 2: COLOR MODE2	
11	MIRROR MODE	1 byte	X: Right and left inverting Y: Top and bottom inverting Z: Top/bottom and right/left inverting N: OFF	
12	FAN CONTROL	1 byte	A: AUTO M: MAX	
13	MONITOR NAME	12 byte		
14	SLOT INPUT	1 byte	0: VIDEO (RGB) 1: COMPONENT1 2: COMPONENT2	(Note 1)
15	TEMPERATURE	3 byte	A/D input value	(Note 2)
16	HOURLY METER	5 byte		Unit : H
17	KEY LOCK	1 byte	0: Lock release 1: Lock	

(Note 1) Dummy data (*) are output when a SLOT manufactured by Pioneer is connected.

7. GENERAL INFORMATION

7.1 DIAGNOSIS

7.1.1 CONFIGURATION OF THE PC BOARD



● Rear View

7.1.2 DIAGNOSIS FOR SHUTDOWN AND POWER-DOWN BY LED

This unit has self-diagnosis functions against abnormalities in the internal circuits and other operational abnormalities, and if any abnormality is detected, the STANDBY/ON indicator (LED) blinks to alert you of it.

How the indicator blinks and possible failure points and power-down points are explained below:

● Shutdown

- Operations : When a microcomputer detected abnormality, it turns the power supply OFF.
- LED display : Blinking in green

Example: How the LED blinks when DIGITAL-IIC communications fail



Number of blinking	Reason
1	Panel Microcomputer failure
2	DIGITAL-IIC communication failure
3	Condensation
4	Temperature abnormality
5	FAN abnormality
6	Module microcomputer failure
7	Wide microcomputer failure
8	RGB-IIC communication failure
9	Audio failure

How to release shutdown

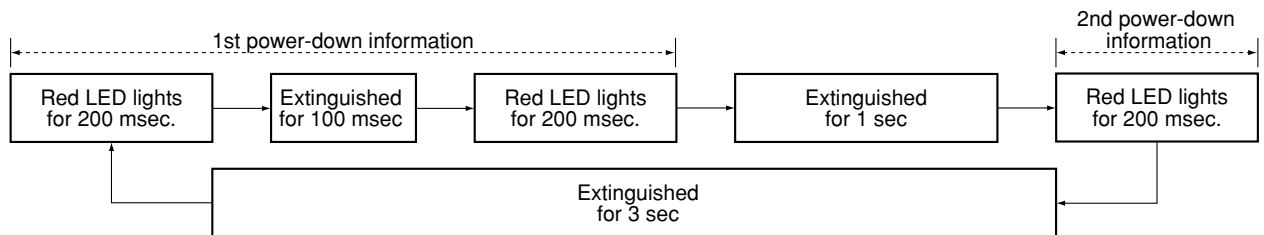
If the Power key on the remote control unit is pressed, the shutdown status is released, and the unit will be turned on. (It is not necessary to press the MAIN POWER button to turn off the unit.)

● Power-down

- Operations : In an emergency, the protection circuits are activated, and the power is turned off.
- LED display : Blinking in red

Note: If more than two protection circuits are activated at almost the same time, the LED indicates this by its blinking-pattern.

Example: How the LED blinks for the first power-down (Y-DC/DC CONVERTER) and the second power-down (Y DRIVE)



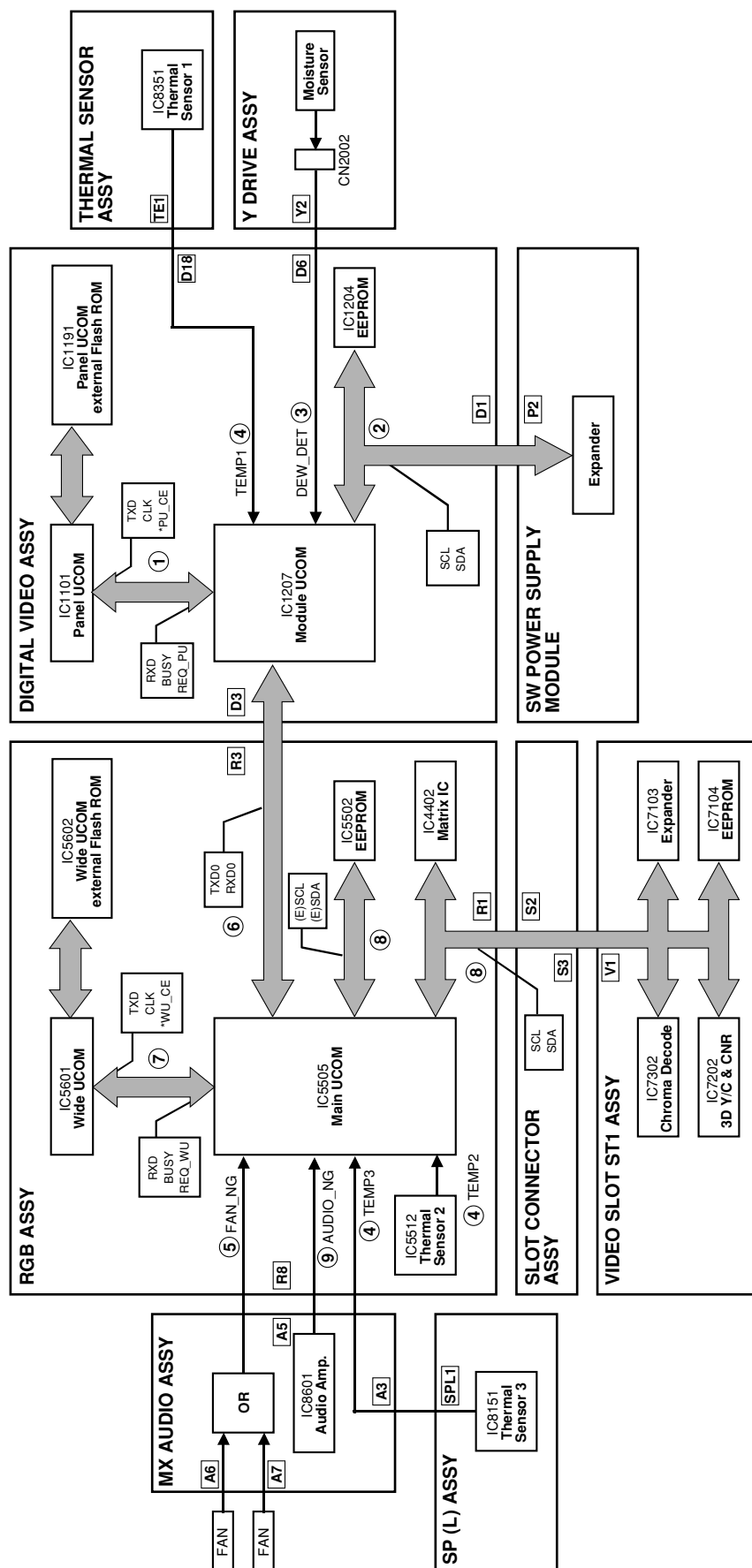
Number of blinks	Failure Point
1	Y-DRIVE
2	Y-DC/DC CONVERTER
3	X-DC/DC CONVERTER
4	X-DRIVE
5	Power supply
6	Address junction
7	Address resonance
8	DIGITAL-DC/DC CONVERTER

How to release power-down

Set the MAIN POWER button to OFF, and wait for about 30 seconds until the LED for PD (power-down) in the power-supply module is extinguished. Wait another 5 seconds, then recover the unit by setting the MAIN POWER button to ON.

Note: After power-down is released, the unit restarts and goes in to Standby mode.

● Block Diagram of the Shutdown Signal System ("STANDBY/ON" LED: Blinking in green)



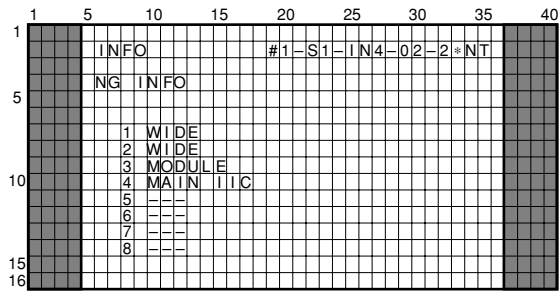
Note: The figures ① - ⑧ indicate the number of times the "STANDBY/ON" LED blinks when shutdown occurs in the corresponding route.

● Diagnosis Method in Shutdown

The data on the past eight shutdowns are stored in memory.

① OSD display of the Shutdown NG history

The shutdown NG history is displayed in "INFORMATION" of the Factory menu.



Display of the PD contents

Shutdown Point	OSD Display
Panel microcomputer communication failure	PANEL
Module IIC communication failure	MOD IIC
Condensation	DEW
Temperature abnormality	TEMP
FAN abnormality	FAN
Module microcomputer communication failure	MODULE
Wide microcomputer communication failure	WIDE
Main IIC communication failure	MAIN IIC
AUDIO failure	AUDIO

② Shutdown NG history by RS-232C command "GSD"

Order	Data Contents	Size
1	The latest "SD INFO"	1 byte
2	First latest "SD INFO"	1 byte
3	Second latest "SD INFO"	1 byte
4	Third latest "SD INFO"	1 byte
5	Fourth latest "SD INFO"	1 byte
6	Fifth latest "SD INFO"	1 byte
7	Sixth latest "SD INFO"	1 byte
8	Seventh latest "SD INFO"	1 byte

Shutdown Point	OSD Data
Panel microcomputer communication failure	1
Module IIC communication failure	2
Condensation	3
Temperature abnormality	4
FAN abnormality	5
Module microcomputer communication failure	6
Wide microcomputer communication failure	7
Main IIC communication failure	8
AUDIO failure	9

● Shutdown diagnosis

① Panel microcomputer failure

Condition : When the module microcomputer failed in communication with the panel microcomputer

Results : An OSD is displayed for 30 seconds after the failure is detected; then the power is shut down.

Possible causes

- Open/short-circuit of the communication lines in the assembly

② DIGITAL-IIC communication failure

Condition : When the module microcomputer failed in communication with an external EEPROM or EXPANDER

Results : An OSD is displayed for 30 seconds after the failure is detected; then the power is shut down.

Note: A DIGITAL-IIC communication failure may occur in Standby mode.

Possible causes

- Open / Short-circuit of communication line in the assemblies.
- Breaking of wire between the following point:
DIGITAL VIDEO Assy (D1) ↔ SW POWER SUPPLY Module (P2).

③ Condensation detection

Condition : When condensation has formed inside the unit

Results : As soon as condensation is detected, the unit will shut down.

Possible cause other than condensation

- Disconnection of CN2002 between the condensation sensor and the Y DRIVE Assy

④ Abnormally high temperature

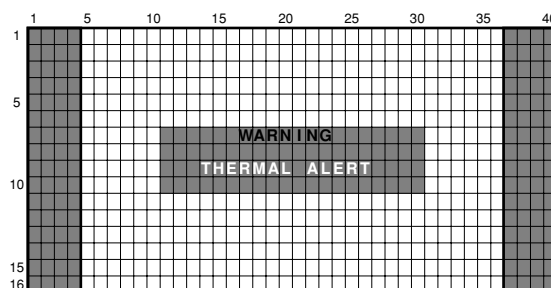
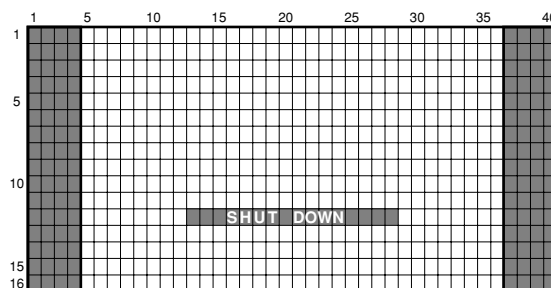
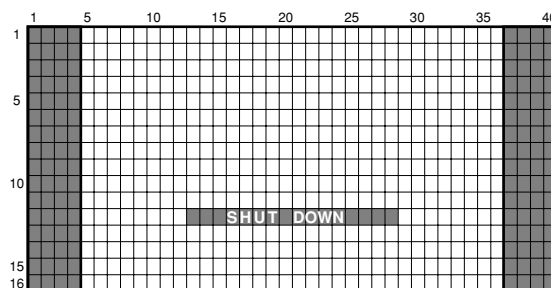
Condition : When the internal temperature of the unit becomes abnormally high

Results : An OSD is displayed for 30 seconds after the failure is detected; then the power is shut down.

Possible causes if this abnormality occurs in an environment in which the temperature is not so high

- Disconnection between the SP TERMINA (L) Assy (SPL1) and MX AUDIO Assy (A3).
- Disconnection between the MX AUDIO Assy (A5) and RGB Assy (R8).
- Disconnection between the DIGITAL VIDEO Assy (D18) and temperature sensor 1 (TE1).

Screen display



Reference

Shutdown temperature of each temperature sensor

TEMP2 data ≥ 150 ($\approx 80^{\circ}\text{C}$)

TEMP3 data ≥ 101 ($\approx 56^{\circ}\text{C}$)

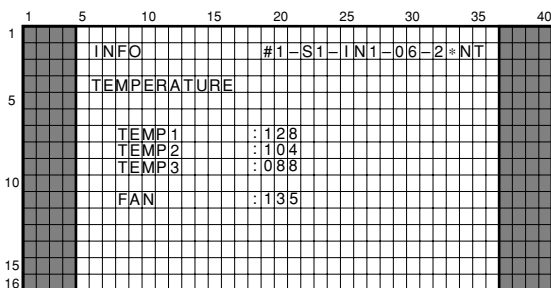
As for the TEMP 1 sensor, a shutdown occurs when a disconnection of connectors is detected, but does not occur because of temperature.

Temperature displayed in "INFORMATION" of the Factory menu

TEMP1 ($^{\circ}\text{C}$) \approx TEMP1 (data) -50

TEMP2 ($^{\circ}\text{C}$) \approx TEMP2 (data) /2+5

TEMP3 ($^{\circ}\text{C}$) \approx TEMP3 (data) /2+5



⑤ FAN failure

Condition : Fan failure

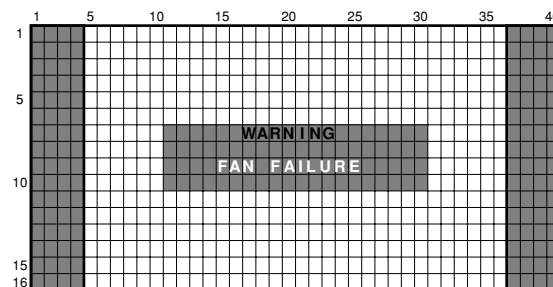
Results : An OSD is displayed for 30 seconds after the failure is detected; then the power is shut down.

Note: Fan failure is detected only in the following cases:

- When the FAN CONTROL is set to MAX
- When the FAN CONTROL is set to AUTO, and the temperature at the TEMP3 sensor is 30°C or higher (Fan failure is not detected while the fan is not activated even if connectors become disconnected.)

Possible causes

- Disconnection of a junction connector between FAN (A6) and the MX AUDIO Assy (A7).
- Disconnection of a connector between the MX AUDIO Assy (A5) and the RGB Assy (R8).
- Forced stop of the fan caused by a foreign object being caught in the fan.



⑥ Module microcomputer failure

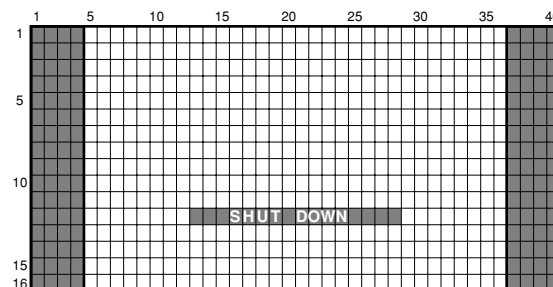
Condition : When the main microcomputer has failed in communication with the module microcomputer

Results : An OSD is displayed for 30 seconds after the failure is detected; then the power is shut down.

Note: A module microcomputer communication failure may occur in Standby mode.

Possible causes

- Open / Short-circuit of communication line in the Assy.
- Disconnection of a connector between the RGB Assy (R3) and the DIGITAL VIDEO Assy (D3).
- Writing defectiveness of module microcomputer (IC1207) software.



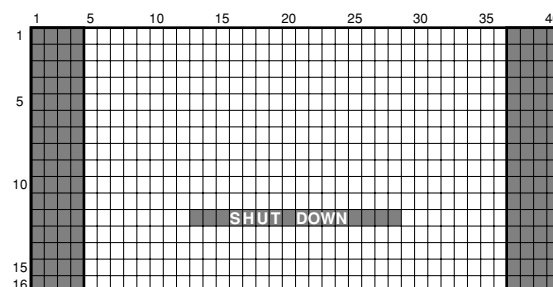
⑦ Wide microcomputer failure

Condition : When the main microcomputer failed in communication with the wide microcomputer

Results : An OSD is displayed for 30 seconds after the failure is detected; then the power is shut down.

Possible causes

- Open / Short-circuit of communication line in the Assy.
- Writing defectiveness of the wide-microcomputer (IC5601) software.
- Writing defectiveness of the external Flash ROM (IC5602) of the wide-microcomputer.



⑧ RGB-IIC communication failure

Condition : When the main microcomputer failed in IIC communication

Results : An OSD is displayed for 30 seconds after the failure is detected; then the power is shut down.

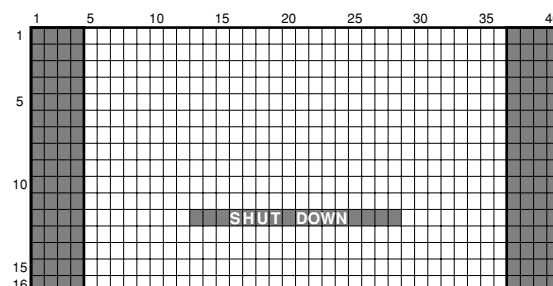
Note: An RGB-IIC communication failure may occur in Standby mode.

Possible causes

- Open / Short-circuit of communication line in the Assy.
- Incomplete insertion of a SLOT or a SLOT junction PC board

Note: In a case of incomplete insertion of a SLOT, the following symptoms may occur in addition to the above results.

- Audio signals to INPUT 3 and INPUT 4 are not output.
- Switching to INPUTs 3-5 (SLOT function) is impossible.
- Video signals to INPUT 1 and INPUT 2 are not displayed.



⑨ Audio failure

Condition : When a DC component is added on the speaker output line

Results : The power is shut down as soon as a failure is detected.

Possible causes

- Disconnection of a connector between the MX AUDIO Assy (A5) and the RGB Assy (R8).
- Short-circuiting between + and - of C8615 and C8622.

● Block Diagram of the Power Down Signal System ("STANDBY/ON" LED: Blinking red)

A

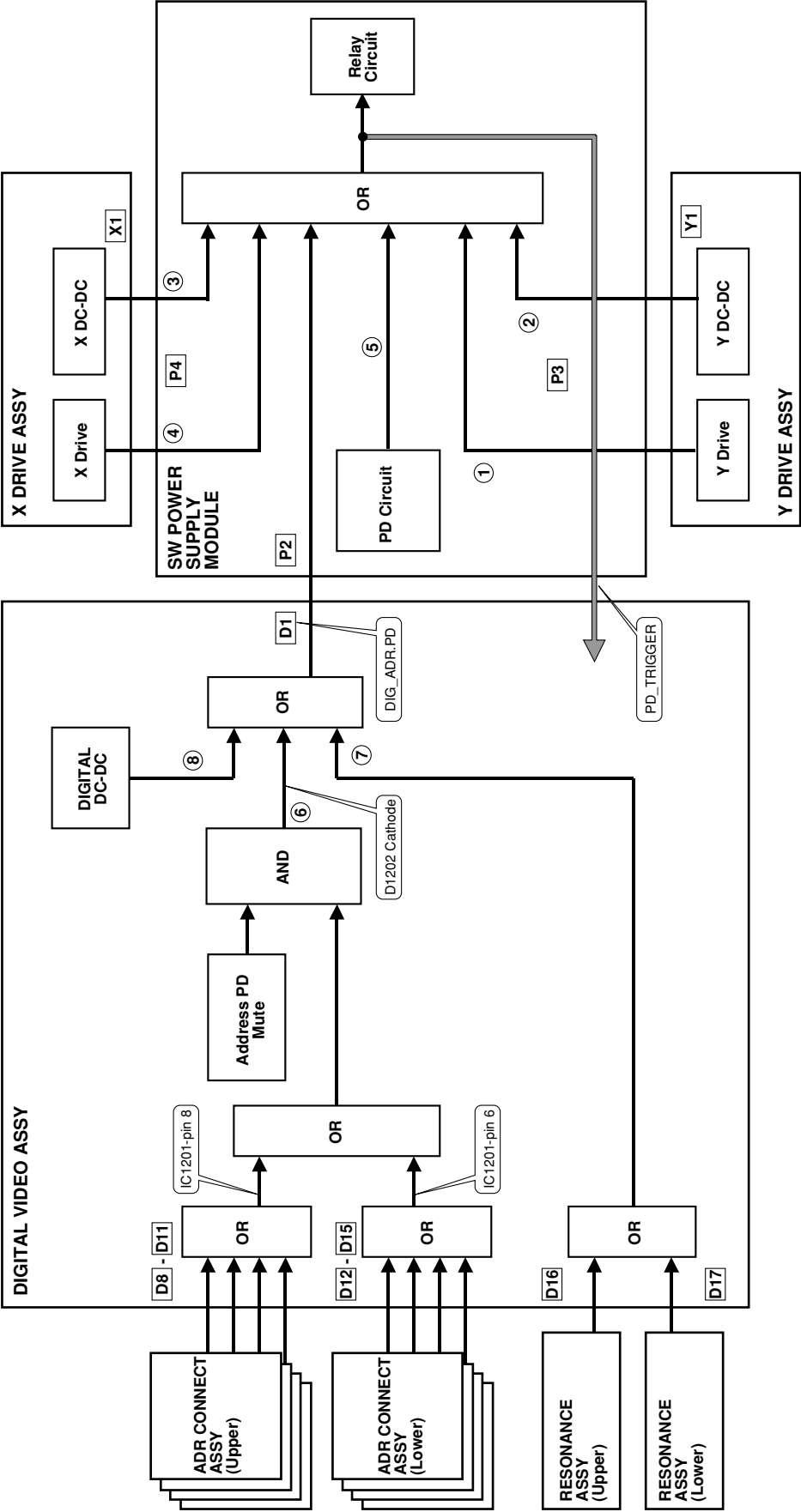
B

C

D

E

F



Note: The figures ① - ⑧ indicate the number of times the "STANDBY/ON" LED blinks when shutdown occurs in the corresponding route.

● Types and function of the various protection circuits (P.D. circuits)

Assy Name	OSD Display	Red "STANDBY/ ON" LED Number of Blinks	Type of P.D. Circuits	Function	Remarks
Y DRIVE Assy	Y-DRV	1	VCP OCP	P.D. by VCP overcurrent	
	Y-DDC	2	VOFS OVP	P.D. by VOFS overvoltage	
			VOFS UVP	P.D. by VOFS undervoltage (= overcurrent)	
			VH OVP	P.D. by VH overvoltage	
			VH UVP	P.D. by VH undervoltage (= overcurrent)	
			IC5V UVP	P.D. by IC5V undervoltage (= overcurrent)	
X DRIVE Assy	X-DDC	3	VRN OVP	P.D. by VRN overvoltage	
			VRN UVP	P.D. by VRN undervoltage (= overcurrent)	
	X-DRV	4	VCP OCP	P.D. by VCP overcurrent	
SW POWER SUPPLY Module	POWER	5	VSUS OVP	P.D. by VSUS overvoltage	
			VSUS UVP	P.D. by VSUS undervoltage (= overcurrent)	
			VADR OVP	P.D. by VADR overvoltage	
			VADR UVP	P.D. by VADR undervoltage (= overcurrent)	
			15V OVP	P.D. by 15V overvoltage	
			15V UVP	P.D. by 15V undervoltage (= overcurrent)	
			12V UVP	P.D. by 12V undervoltage (= overcurrent)	
			6.5V OVP	P.D. by 6.5V overvoltage	
			6.5V UVP	P.D. by 6.5V undervoltage (= overcurrent)	
			13.5V UVP	P.D. by 13.5V undervoltage (= overcurrent)	
			-9V UVP	P.D. by -9V undervoltage (= overcurrent)	
			+B OVP	P.D. by +B overvoltage	
			+B OCP	P.D. by +B overcurrent	
			AC200V P.D.	P.D. by AC200V applied	Note 1
				PFC module overheat protection	
				VSUS arc resistance overheat protection	
ADR CONNECT Assy	ADRES	6	ADR.PD	P.D. by disconnection of the connectors	
RESONANCE Assy	ADR-K	7	ADR.K.PD	P.D. by ICP open and TCP defective	
DIGITAL VIDEO Assy	DC-DC	8	5.0V OVP	P.D. by 5V overvoltage	
			5.0V UVP	P.D. by 5V undervoltage (= overcurrent)	
			3.3V OVP	P.D. by 3.3V overvoltage	
			3.3V UVP	P.D. by 3.3V undervoltage (= overcurrent)	
			2.5V OVP	P.D. by 2.5V overvoltage	
			2.5V UVP	P.D. by 2.5V undervoltage (= overcurrent)	

Reference

OVP : Over Voltage Protect
 UVP : Under Voltage Protect
 OCP : Over Current Protect
 PD : Power Down

Note 1: The AC200V P.D. circuit is not mounted in the PDP-503MXE model.

● Diagnosis Method in Power Down

The data (1st/2nd/time stamp) on the past eight power-downs are stored in memory.

① OSD display of the PD history

The PD history displayed in "INFORMATION" of the Factory menu.

1	5	10	15	20	25	30	35	40
1	INFO			#1-S1-IN4-02-2*NT				
5	PD INFO							
	1ST	2ND						
	1 X-DDC	---	---	05148H25M				
	2 ADR-K	X-DDC	---	02248H14M				
	3 Y-DRV	DC-DC	---	01358H36M				
	4 ADRES	---	---	00348H15M				
	5	---	---	00000H00M				
	6	---	---	00000H00M				
	7	---	---	00000H00M				
	8	---	---	00000H00M				

Display of PD point

Power-Down Point	OSD Display
Y-DRIVE	Y-DRV
Y-DC/DC CONVERTER	Y-DDC
X-DC/DC CONVERTER	X-DDC
X-DRIVE	X-DRV
Power supply	POWER
ADDRESS junction	ADRES
ADDRESS resonance	ADR-K
DC/DC CONVERTER (DIGITAL)	DC-DC

Time stamp display

[OOOOOH] : HOUR, [OOM] : MINUTE

Example:

Time stamp display is [65432H10M] → 65432 hours 10 minutes

② Retrieval of PD history by RS-232C command "GPD"

Data of PD point

Order	Data contents	Size
1	The latest "1st PD" point	1 byte
2	The latest "2nd PD" point	1 byte
3	The latest PD time stamp	7 byte
4	Second latest "1st PD" point	1 byte
5	Second latest "2nd PD" point	1 byte
6	Second latest PD time stamp	7 byte
7	Third latest "1st PD" point	1 byte
8	Third latest "2nd PD" point	1 byte
9	Third latest PD time stamp	7 byte
10	Fourth latest "1st PD" point	1 byte
11	Fourth latest "2nd PD" point	1 byte
12	Fourth latest PD time stamp	7 byte
13	Fifth latest "1st PD" point	1 byte
14	Fifth latest "2nd PD" point	1 byte
15	Fifth latest PD time stamp	7 byte
16	Sixth latest "1st PD" point	1 byte
17	Sixth latest "2nd PD" point	1 byte
18	Sixth latest PD time stamp	7 byte
19	Seventh latest "1st PD" point	1 byte
20	Seventh latest "2nd PD" point	1 byte
21	Seventh latest PD time stamp	7 byte
22	Eighth latest "1st PD" point	1 byte
23	Eighth latest "2nd PD" point	1 byte
24	Eighth latest PD time stamp	7 byte

Power-Down Point	"GPD" Data
Y-DRIVE	1
Y-DC/DC CONVERTER	2
X-DC/DC CONVERTER	3
X-DRIVE	4
Power supply	5
ADDRESS junction	6
ADDRESS resonance	7
DC/DC CONVERTER (DIGITAL)	8

Time stamp data

upper 5 byte: HOUR, lower 2 byte: MINUTE

Example:

Time stamp is [6543210] → 65432 hours 10 minutes

● Diagnosis of error points in the various protection-circuit (P.D. circuits) operations (Red "STANDBY/ON" LED blinks)

Number of Blinks	P.D. Point in Operation	Error Point	Possible Part in failure	Circuit State	P.D. Circuit in Operation	Diagnosis Condition
1	Y DRIVE	Y DRIVE Assy	IC2206, IC2214 (Pulse module), IC2203, IC2204, IC2212, IC2213, IC2216, IC2217, R2209	K2211 Lo	VCP OCP	
		VOFS D/D CONV. BLOCK (Y DRIVE Assy)	IC2702, IC2709, IC2715	K2712 Lo	VOFS OVP	
		VOFS D/D CONV. BLOCK (Y DRIVE Assy)	IC2701, IC2702, IC2709, IC2715			Drive section (control signals, output elements etc.) in normal operation
		VH D/D CONV. BLOCK (Y DRIVE Assy)	Q2211, Q2212, R2277, IC2208, IC2210	K2709 Lo	VOFS UVP	VOFS D/D CONV. BLOCK in normal operation
		VH D/D CONV. BLOCK (Y DRIVE Assy)	IC2712, IC2716	K2719 Lo	VH OVP	
2	Y DC DC	VH D/D CONV. BLOCK (Y DRIVE Assy)	IC2711, IC2712, IC2716			Drive section (control signals, output elements etc.) in normal operation
		SCAN (A), (B) Assy	SCAN IC	K2718 Lo	VH UVP	VH D/D CONV. BLOCK in normal operation
		IC5V D/D CONV. BLOCK (Y DRIVE Assy)	IC2704, IC2706, IC2717			SCAN Assy in normal operation
		SCAN (A), (B) Assy	SCAN IC	K2713 Lo	IC5V UVP	IC5V D/D CONV. BLOCK in normal operation
		IC5V D/D CONV. BLOCK (Y DRIVE Assy)	IC2704, IC2706, IC2717			SCAN Assy in normal operation
		VRN D/D CONV. BLOCK (X DRIVE Assy)	IC3702, IC3712	K3708 Lo	VRN OVP	
3	X DC DC	VRN D/D CONV. BLOCK (X DRIVE Assy)	IC3701, IC3702, IC3712			Drive section (control signals, output elements etc.) in normal operation
		X DRIVE Assy	Q3122	K3705 Lo	VRN UVP	VRN D/D CONV. BLOCK in normal operation
4	X DRIVE	X DRIVE Assy	IC3200, IC3201 (pulse module), IC3103, IC3104, IC3106, IC3107, IC3110, IC3113, R3109	K3103 Lo	VCP OCP	
		X DRIVE Assy	IC3200, IC3201 (Pulse module)			In a case where PD does not occur if the P4 connector is disconnected
		Y DRIVE Assy	IC2206, IC2214 (Pulse module)			In a case where PD does not occur if the P3 connector is disconnected
5	PS	MX AUDIO Assy	IC8601 (Audio IC)			In a case where PD does not occur if the P6 connector is disconnected
		ADDRESS CONNECT A - D Assy, RESONANCE Assy, D/D CONV. BLOCK (DIGITAL VIDEO Assy)				In a case where PD does not occur if Pin 5 of the P2 connector is disconnected
		SW POWER SUPPLY Module	SW POWER SUPPLY Module			In a case where the voltage is not output even if the P4, P3, P6 connectors and Pin 5 of the P2 connectors are disconnected
6	ADR	ADDRESS CONNECT A-D Assy	Disconnection of the D8 - D15 connectors		ADR. PD	
7	ADR K	RESONANCE Assy	TCP damage of IC6704 (ICP), disconnection of the D16 and D17 connectors, panel microcomputer is defective, external Flash ROM of the panel microcomputer is defective.		ADR. K. PD	
		D/D CONV. BLOCK (DIGITAL VIDEO Assy)	IC1901	K1901 Lo	5.0V OVP	
		D/D CONV. BLOCK (DIGITAL VIDEO Assy)	IC1901	K1902 Lo	5.0V UVP	
		D/D CONV. BLOCK (DIGITAL VIDEO Assy)	IC1901	K1903 Lo	3.3V OVP	
		D/D CONV. BLOCK (DIGITAL VIDEO Assy)	IC1901	K1904 Lo	3.3V UVP	
		D/D CONV. BLOCK (DIGITAL VIDEO Assy)	IC1901	K1905 Lo	2.5V OVP	
		D/D CONV. BLOCK (DIGITAL VIDEO Assy)	IC1901	K1906 Lo	2.5V UVP	

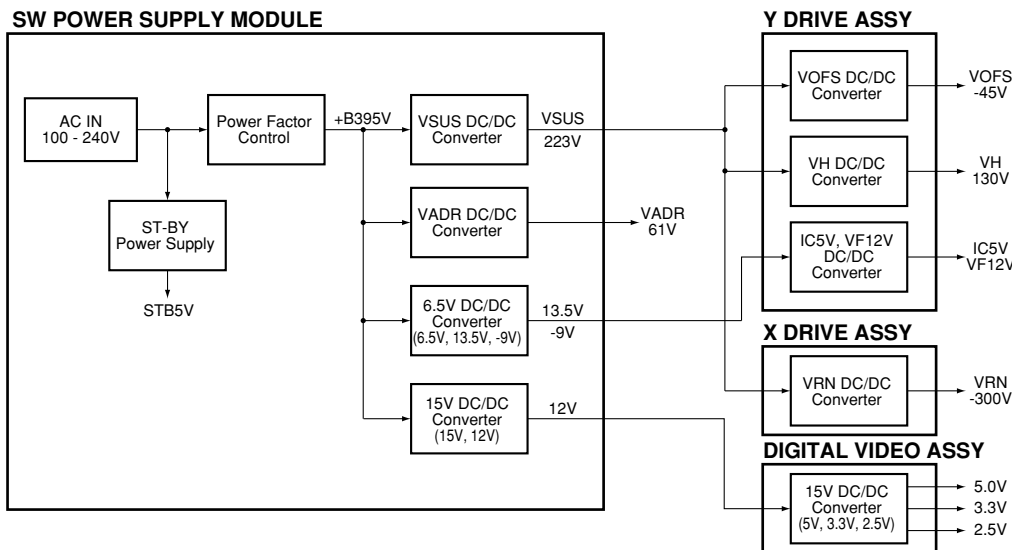
Note on PS PD

The Red "STANDBY/ON" LED blinks five times (power supply PD)

- 1 When the internal protection circuit of the SW POWER SUPPLY Module worked
- 2 When a microcomputer was not able to identify the PD point

Care must be taken because five blinks of the red LED does not always mean that the protection circuit of the SW POWER SUPPLY Module is activated.

● Block diagram of the Power supply section



● Supplementary information

1. Power on/off switch for the large-signal system (SW102)

Function: Only the power for the small-signal system (15V, 12V, 6.5V, 13.5V, and -9V) is on, and the power for the large-signal system (VSUS, VADR) is off.

Usage: Use when only an operational check for the small-signal system is required.

Supplementary information:

When this switch is to be used, the wires of pin 5 (DIG, ADR, and PD) of the P2 connector of the power-supply module should be disconnected to prevent the PD circuit from operating. To turn the power of the large-signal system off without using this switch, operation from an external PC through RS-232C commands "DRF" is basically required. In this case, the above procedure is not required, as the PD circuit is muted by software.

How to turn on the power with a command sent via RS-232C communication when the large signal system's power is off

- ① Check that the unit is in Standby mode.
- ② Transmit the RS-232C command "DRF."
- ③ Turn on the power using the remote control unit, side keys, or the command "PON."

Note: Once the power is turned off, the setting of the large signal system power returns to ON.

If you wish to turn on the power when the large signal system's power is off, transmit the DRF command each time.

2. 200V AC power-down switch (SW101)

Function: While 200V AC voltage is applied, operation of the PD circuit is turned on and off (ON when the switch is set to 100V AC, and OFF when the switch is set to 200V AC).

Setting: For the MXE model only, the switch is set to 200V, and for other models, it is set to 100V.

3. Temperature compensation of the VOFS voltage for the drive system

Function: Control the power supply voltage mentioned above according to temperature. (Temperature compensation works so that the voltage is lowered on the lower-temperature side, and is raised on the higher-temperature side.)

Purpose: To improve the yield by compensating the temperature characteristics of the panel.

Supplementary information:

For this model, temperature compensation is performed only for the VOFS voltage, and not for the VSUS voltage, and it is controlled by software.

4. When a fuse blows

- If a fuse blows, never turn the power on again only after replacing the fuse. (In most cases, the fuse itself did not have any problem. So as long as factors of overcurrent have not been removed, chances of destruction increase every time the power is turned on. In the worst case, about a dozen parts may be destroyed.)
- Generally, the whole power-supply-module assembly must be replaced.

5. Voltage adjustment of the panel drive

As this model employs the electronic VR system for the VSUS and VOFS voltages, and as the voltage-adjustment data are stored in the DIGITAL assembly, voltage adjustment of the panel drive is not necessary when the power-supply modules are changed. (For VADR, VH, and VRN, adjustments with semifixed VR controls are necessary.)

For this model, as the power-supply block has been developed and designed by an outside vendor, at the point you know which module is a cause of failure (through diagnosis described elsewhere in this manual), change the corresponding modules, and do not diagnose or repair the module. Similarly, the switches and the semifixed VRs inside the power-supply module must not be adjusted without a special reason.

7.1.3 AUTOMATIC BACKUP OF DIGITAL VIDEO ASSY DATA

Description

Data in the EEPROM (IC1204/2 kbit) mounted on the DIGITAL VIDEO Assy are automatically copied to an area (Area A in the figure below) of the EEPROM (IC5502/64 kbit) mounted on the RGB Assy as backup data in a case of assembly replacement. Therefore, the adjustment data for the unit (data in the EEPROM of the DIGITAL VIDEO Assy) can be maintained even after replacement of the DIGITAL VIDEO and/or RGB Assy.

Note: As for the COLOR and TINT items, even though they are adjustment data for the unit, as they are stored in Area C (see the figure below) they are not automatically backed up.

Contents of EEPROM on the DIGITAL VIDEO Assy

- Adjustment value of PANEL White Balance
 - PANEL-R HIGH : Adjustment item for the unit
 - PANEL-G HIGH : Adjustment item for the unit
 - PANEL-B HIGH : Adjustment item for the unit
 - PANEL-R LOW : Adjustment item for the unit
 - PANEL-G LOW : Adjustment item for the unit
 - PANEL-B LOW : Adjustment item for the unit

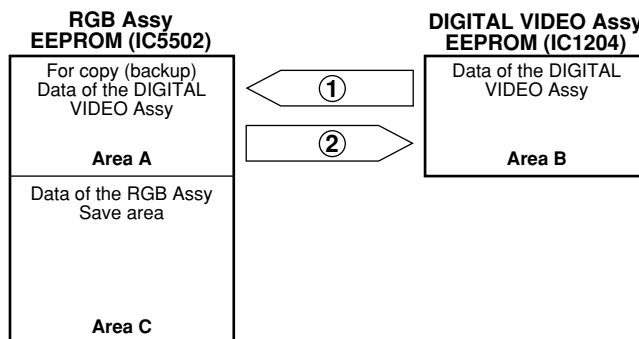
Data are automatically backed up.
- Adjustment value of ABL
 - ABL LEVEL : Adjustment item for the unit

Data are automatically backed up.
- Adjustment value of drive system
 - X-SUS-B : Adjustment item for the unit
 - X-SUS-G : Adjustment item for the unit
 - Y-SUS-B : Adjustment item for the unit
 - Y-SUS-G : Adjustment item for the unit
 - V-SUS : Adjustment item for the unit
 - V-OFFSET : Adjustment item for the unit

Data are automatically backed up.
- Pulse meter
- Hour meter
- Various setting data of FULL MASK

Flow of basic automatic backup

Data in Areas A and B are judged according to keyword as to whether they have already adjusted or not, then copying is automatically performed.



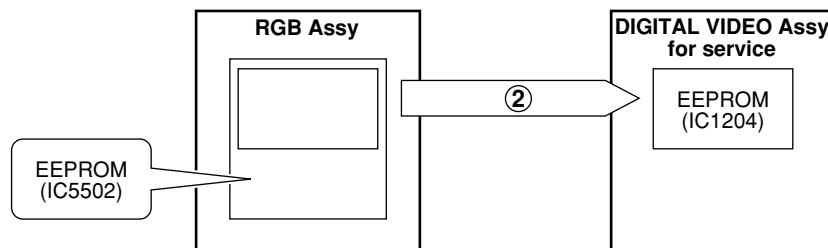
- ① Automatic copying is performed every time the Service Factory mode is entered (regardless of the keyword.)
- ② When the power is turned on, keyword checking is performed, then automatic copying is performed if the keyword for the DIGITAL VIDEO Assy (Area B) is "not adjusted," and that for the RGB Assy is "adjusted."

■ Actual automatic backup operation

1. When the DIGITAL VIDEO Assy is replaced (Using the service Assy)

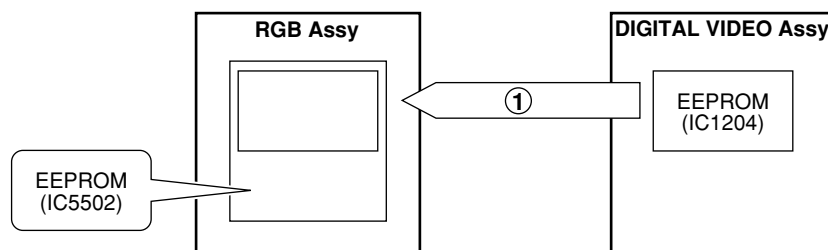
Keyword modification is not needed.

Replace the DIGITAL VIDEO Assy with that for service, then turn on the power. Thus, the backup data in the EEPROM of the RGB Assy are automatically copied to the EEPROM of the DIGITAL VIDEO Assy.



2. When the RGB Assy is replaced (whether replaced with the assembly for service or not does not matter)

Replace the RGB Assy, then enter the Service Factory mode. The backup data in the EEPROM of the DIGITAL VIDEO Assy are then automatically copied to the EEPROM of the RGB Assy.



3. When the DIGITAL VIDEO Assy is replaced (reuse of a repaired part) When installing the repaired DIGITAL VIDEO Assy in other unit

It is necessary to change the keyword of the DIGITAL VIDEO Assy to be reused to "not adjusted."

Before removing the DIGITAL VIDEO Assy to be reused, enter the Service Factory mode and execute SERVICE PARTS in the INITIALIZE item. (The unit must operate properly, and OSD display must be possible.) If SERVICE PARTS cannot be executed, readjustment is required.

Note: If a repaired DIGITAL VIDEO Assy is mounted in another unit (Unit 2) without this change of keyword, the automatic backup function will not work properly. Moreover, if Unit 2 is set to Service Factory mode in this condition, data in force before the repair of the DIGITAL VIDEO Assy will be copied to Area A of the RGB Assy of Unit 2, overwriting the data necessary for Unit 2. Once overwritten, the original data will not be restored.

4. When the DIGITAL VIDEO Assy is replaced (reuse of a repaired part) When installing the repaired DIGITAL VIDEO Assy in the original unit

It is not necessary to change the keyword.

After the repaired DIGITAL VIDEO Assy is mounted in the original unit, the unit can operate with its latest adjustment values.

After replacement, turn on the power. Then, the backup data in the EEPROM of the RGB Assy will automatically be copied to the EEPROM of the DIGITAL VIDEO Assy.

5. When replacing both the DIGITAL VIDEO Assy and the RGB Assy simultaneously

Automatic backup function does not work properly. Readjustment is necessary.

■ Others

1. As for the COLOR and TINT items, even though they are adjustment data for the unit, as they are stored in Area C, they are not automatically backed up. For these two items, the following applies:

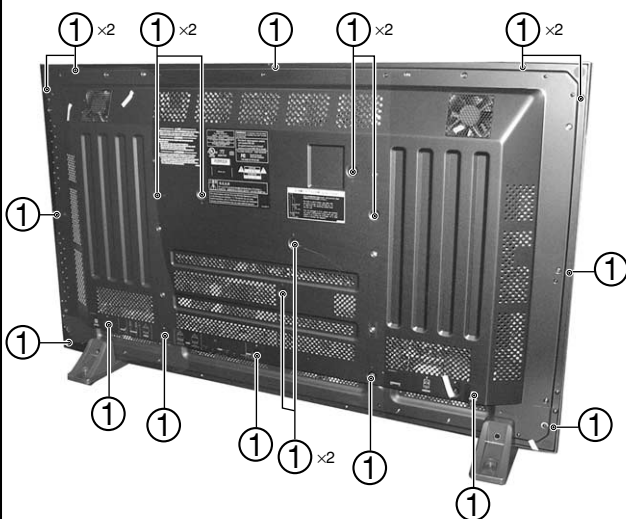
- ① When only the DIGITAL VIDEO Assy is replaced
Readjustment is not required, as data are stored in the RGB Assy.
- ② When the RGB Assy is replaced
After repair, readjustment is required.

2. Except for data for the COLOR and TINT items, data in Area C in the EEPROM of the RGB Assy are assembly-adjustment data. Readjustment is not required when the RGB Assy is replaced with one for service.

7.1.4 DISASSEMBLY

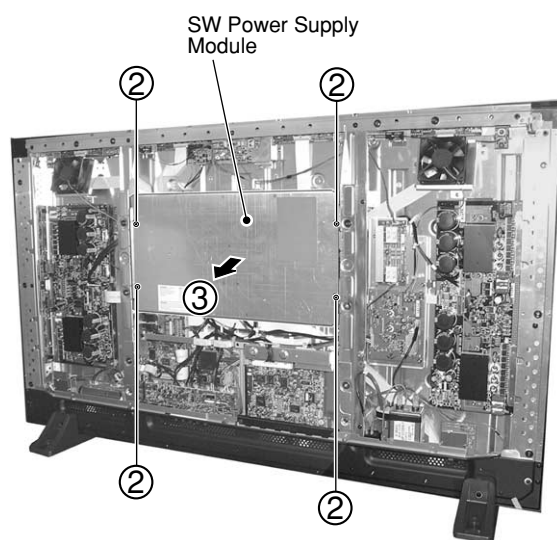
SW Power Supply Module

- ① Remove the Rear Case (50M). (Screws × 20)

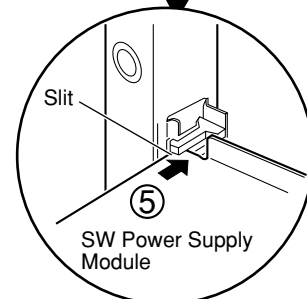
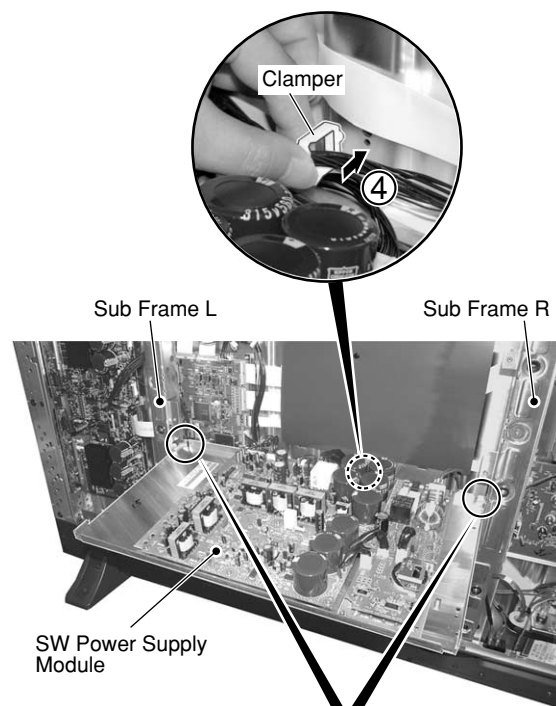


- ② Remove the four screws.

- ③ Remove the SW Power Supply Module.



- ④ Remove the Clamper and insert it to another place, as indicated in the photo below.



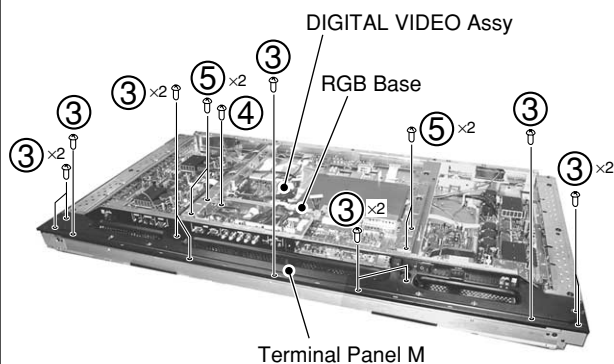
- ⑤ Insert the SW Power Supply Module into the slits of Sub Frame L and R.



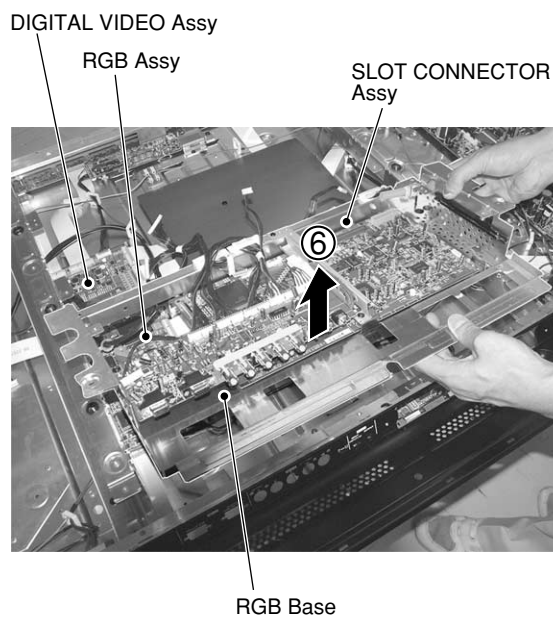
Diagnosis

DIGITAL VIDEO Assy

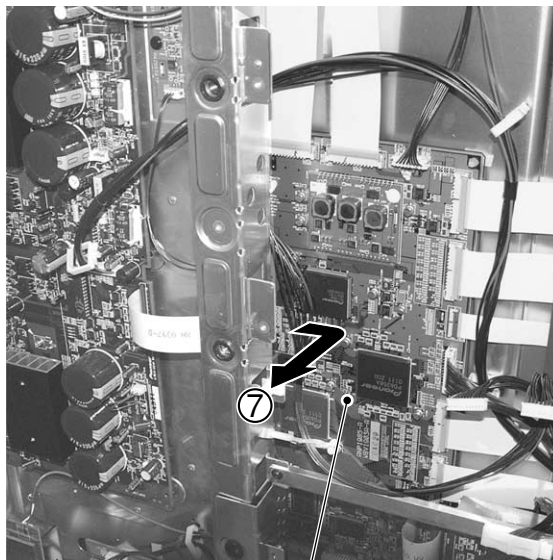
- ① Remove the Rear Case (50M). (Screws × 20)
- ② Remove the SW Power Supply Module.
(Connector, Screws × 4)
- ③ Remove the Terminal Panel M. (Screws × 11)
- ④ Remove the screw of the earth block.
- ⑤ Remove the RGB Base. (Screws × 4)



- ⑥ Remove the connectors and binders,
and remove the RGB Base with PCB Assys.



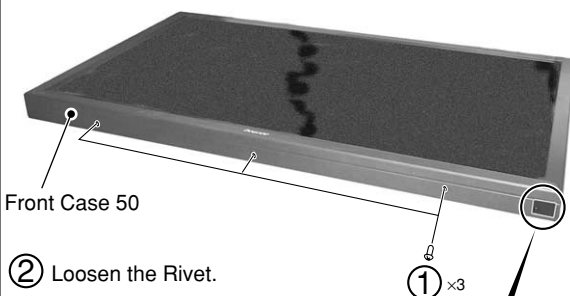
- ⑦ Remove the DIGITAL VIDEO Assy.
(Connector, Circuit Board Spacers × 6)



DIGITAL VIDEO Assy

Y DRIVE, SCAN (A), (B) Assy

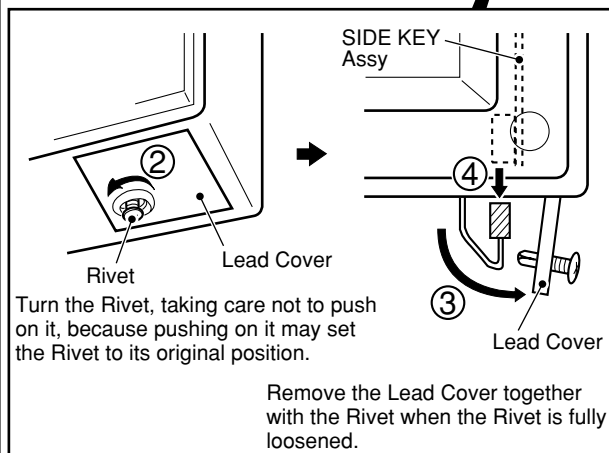
- ① Remove the three screws.



- ② Loosen the Rivet.

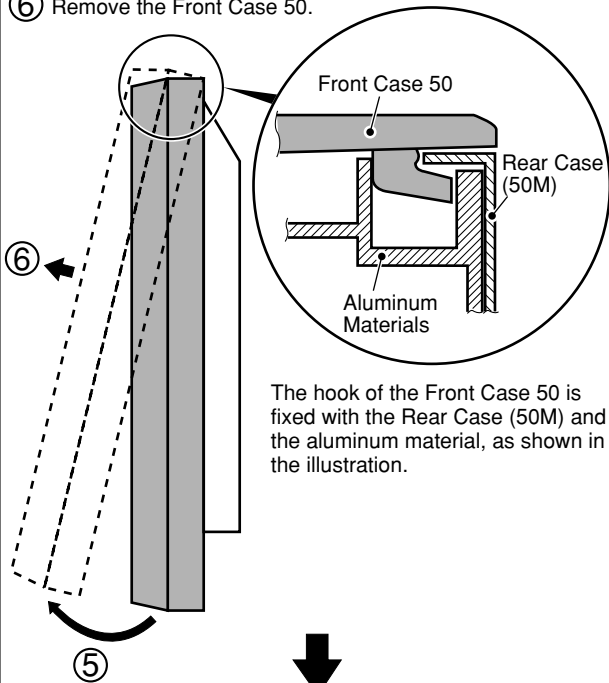
- ③ Remove the Lead Cover.

- ④ Pull out the Flexible Cable.



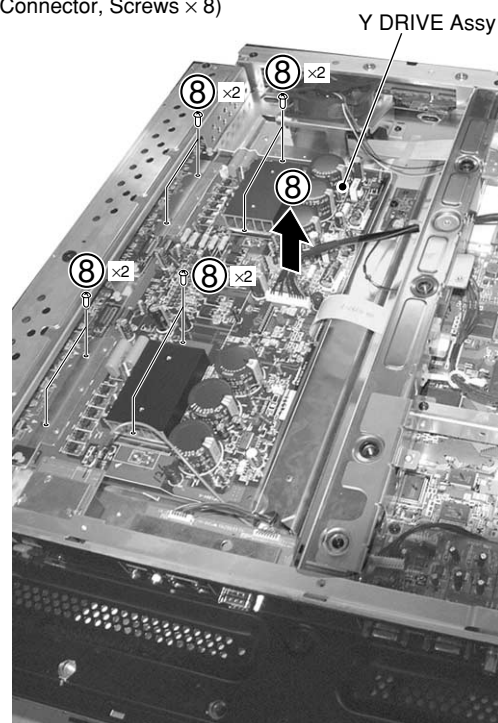
- ⑤ Detach the lower part of the Front Case 50 so that it can swing open (hinged at the top).

- ⑥ Remove the Front Case 50.



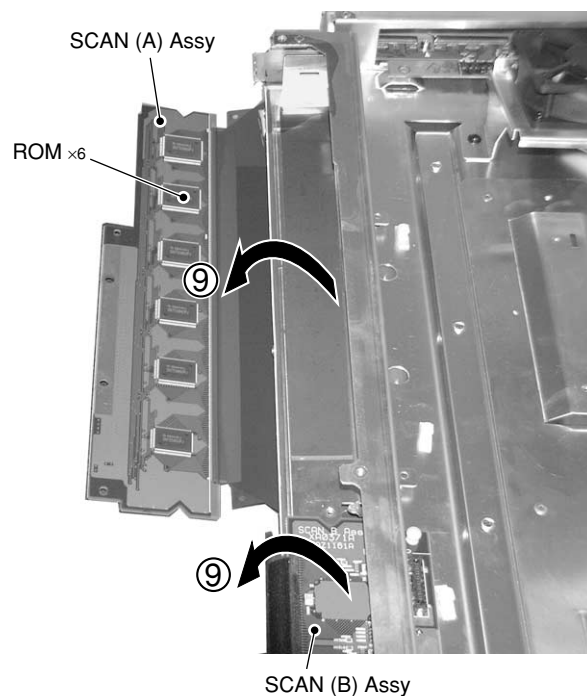
- ⑦ Remove the Rear Case (50M). (Screws × 20)

- ⑧ Remove the Y DRIVE Assy. (Connector, Screws × 8)



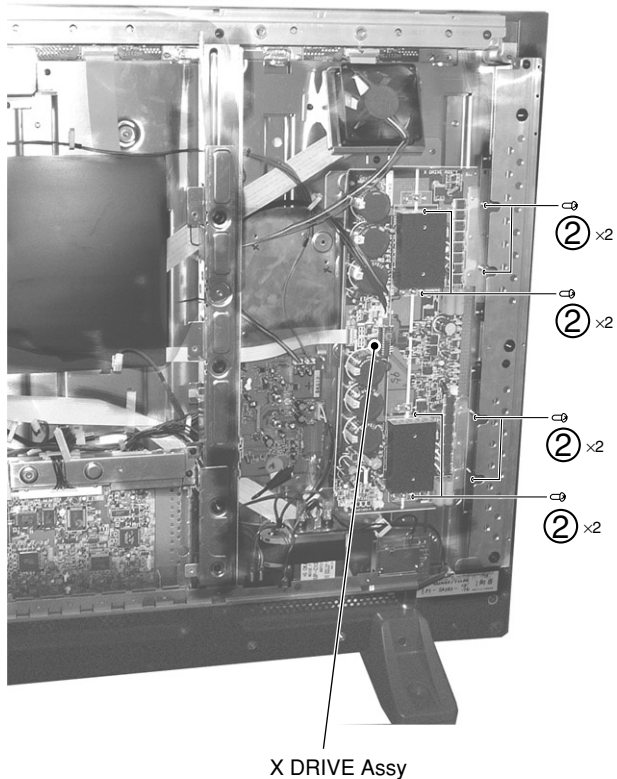
- ⑨ Reverse the SCAN (A) and SCAN (B) Assemblies.

- ⑩ Exchange the ROM if necessary.



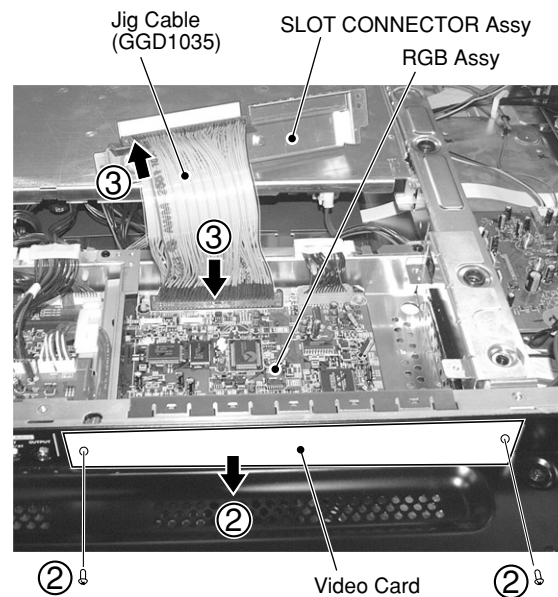
X DRIVE Assy

- ① Remove the Rear Case (50M). (Screws × 20)
- ② Remove the X DRIVE Assy. (Connector, Screws × 8)

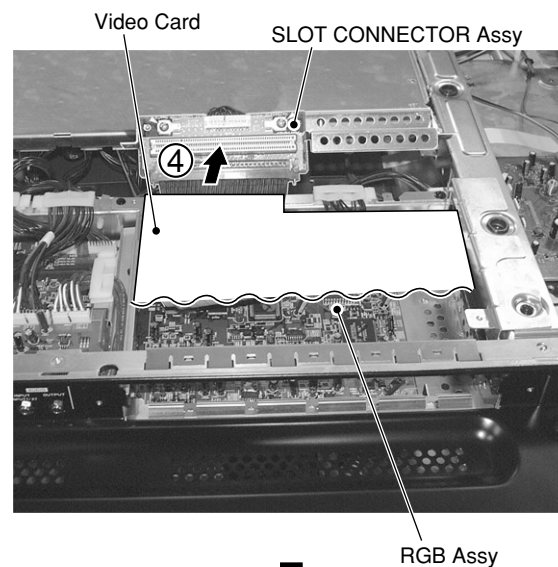


Diagnosis of the Video Card (PDA-5002)

- ① Remove the Rear Case (50M). (Screws × 20)
- ② Remove the Video Card. (Screws × 2)
- ③ Remove the SLOT CONNECTOR Assy from the RGB Assy and reconnect it with the Jig Cable (GGD1035).



- ④ Reconnect the Video Card. (Do not insert it into the slot.)



Diagnosis

7.2 IC INFORMATION

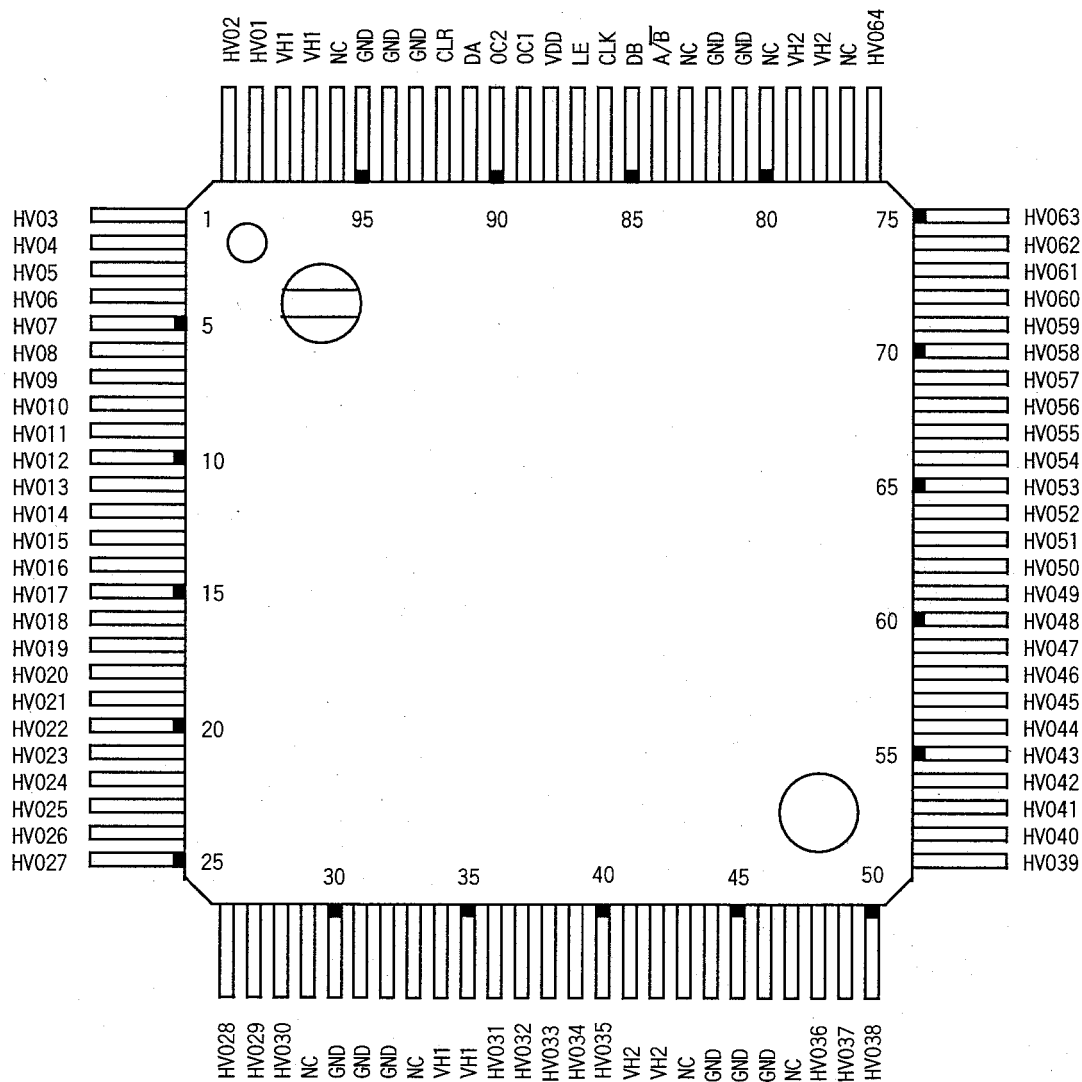
• The information shown in the list is basic information and may not correspond exactly to that shown in the schematic diagrams.

• List of IC

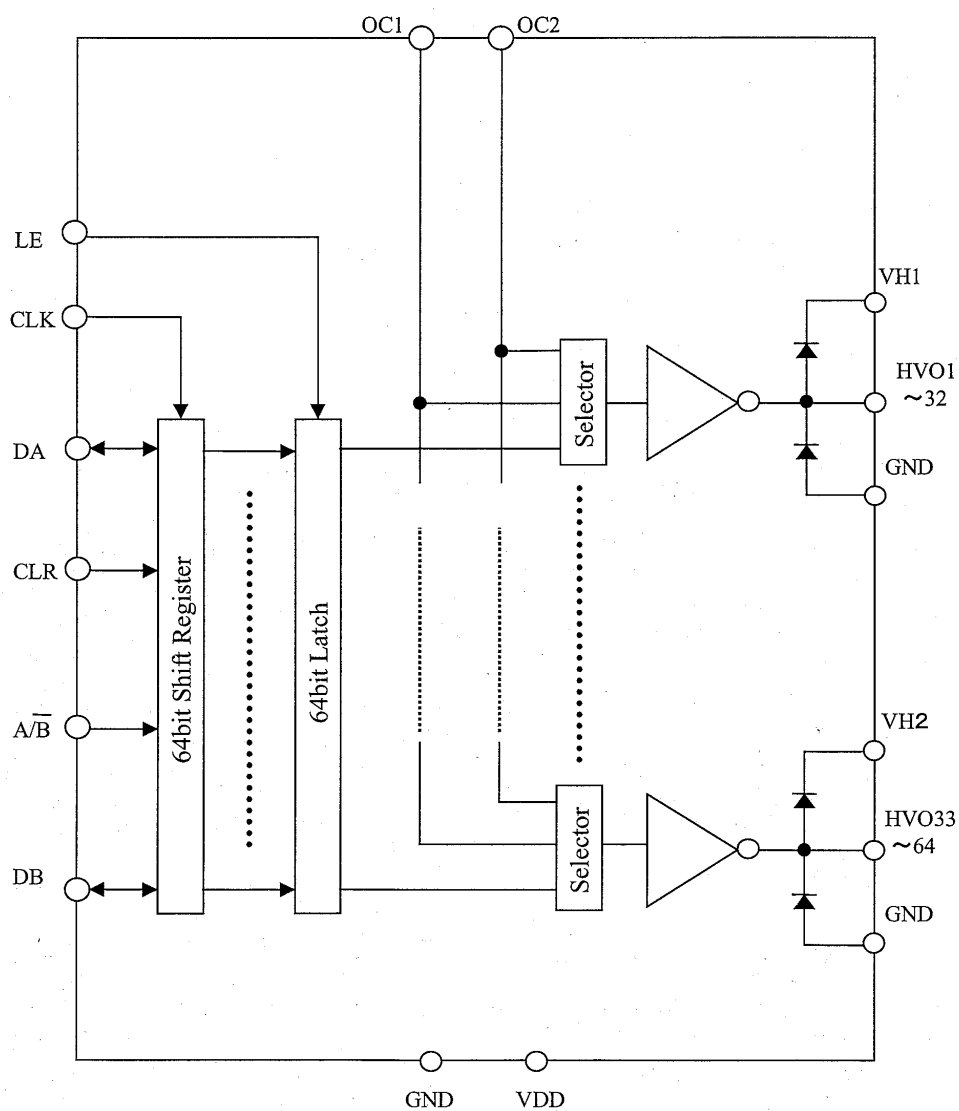
SN755864APZP, HD64F2328VF, PE1012A, PE1013B, M30624FGAFP, PD6358A, PST9246N, FS781BZB, STK795-470, BA5417, ML6426CS-1, CXA3516R

■ SN755864APZP (SCAN A ASSY : IC6201 - IC6206, SCAN B ASSY : IC6001 - IC6006) Scan IC

● Pin Assignment (Top view)



● Block Diagram



● Pin Function

Name	Pin No.	I/O	Num.	Function
CLK	86	I	1	Shift clock (start edge partial response)
DA	91	I/O	1	The serial data input of shifting register
DB	85	I/O	1	The serial data output of shifting register
LE	40	I	1	It output data done a latch of by "H" level
CLR	92	I	1	It do data of shift register with "H" by "L" level
A/B	84	I	1	A shift directional control signal of shift register
OC1	89	I	1	An output control terminal of HVO
OC2	90	I	1	An output control terminal of HVO
HVO	99, 100, 1-28 36-40, 48-76	O	64	High voltage drive output (HVO1 - HVO64)
VDD	88	-	1	Logic power supply
GND	30-32, 44-46 81-82, 93, 94-95	-	11	Standard potential. This is common to HVO1 - HVO64.
VH1	34, 35, 97, 98	-	4	The high potential circuit power supply which is common to HVO1 - HVO32
VH2	41, 42, 78, 79	-	4	The high potential circuit power supply which is common to HVO33 - HVO64
NC	29, 33, 43, 47 77, 80, 83, 96	-	8	It is the insulation electrically

HD64F2328VF (DIGITAL VIDEO ASSY : IC1101)

Scan IC

● Pin Function (1/3)

No.	Pin Name	Function
1	CS_23	PE5064 (IC1703) control output
2	NC	NC Terminal
3	VSS	GND
4	VSS	GND
5	VCC	3.3V power supply
6	UA0	Address bus
7	UA1	Address bus
8	UA2	Address bus
9	UA3	Address bus
10	VSS	GND
11	UA4	Address bus
12	UA5	Address bus
13	UA6	Address bus
14	UA7	Address bus
15	UA8	Address bus
16	UA9	Address bus
17	UA10	Address bus
18	UA11	Address bus
19	VSS	GND
20	UA12	Address bus
21	UA13	Address bus
22	UA14	Address bus
23	UA15	Address bus
24	UA16	Address bus
25	UA17	Address bus
26	UA18	Address bus
27	UA19	Address bus
28	VSS	GND
29	UA20	Address bus
30	PA5	NC terminal
31	PA6	NC terminal
32	PA7	NC terminal
33	CE_PN	Enables / for panel microcomputer
34	CE_PN	Enables / for panel microcomputer
35	VSS	GND
36	VSS	GND
37	APLP	The APL value acquisition trigger signal input
38	VD_31	The V signal input from IC1401 (PD6358)
39	VCC	3.3V power supply
40	UD0	Data bus
41	UD1	Data bus
42	UD2	Data bus
43	UD3	Data bus
44	VSS	GND
45	UD4	Data bus
46	UD5	Data bus
47	UD6	Data bus
48	UD7	Data bus
49	UD8	Data bus
50	UD9	Data bus

● Pin Function (2/3)

No.	Pin Name	Function
51	UD10	Data bus
52	UD11	Data bus
53	VSS	GND
54	UD12	Data bus
55	UD13	Data bus
56	UD14	Data bus
57	UD15	Data bus
58	VCC	3.3V power supply
59	D_TXD	Communication with IC1207 (module microcomputer)
60	EXT_TXD	Communication with the outside (program notes)
61	D_RXD	Communication with IC1207 (module microcomputer)
62	EXT_RXD	Communication with the outside (program notes)
63	D_CLK	Communication with IC1207 (module microcomputer)
64	P60	NC terminal
65	VSS	GND
66	CS_FLASH	A flash memory control terminal
67	VSS	GND
68	VSS	GND
69	P61	NC terminal
70	UDREQ	IC1703 (PE5064) control terminal
71	P63	NC terminal
72	WE_FLASH	A flash memory note control signal (unused)
73	BUSY	The command receipt of a message lye Norwich output
74	REQ_PU	A communication demand to a module microcomputer
75	SEL23B	IC1703 (PE5064) control terminal
76	CLRB	IC1703 (PE5064) control terminal
77	FR_SEL	The free run select signal output
78	RST31B	The reset output to IC1301, IC1401 (PD6358)
79	RST23B	The reset output to IC1703 (PE5064)
80	FWE	Microcomputer program note control signal
81	RESET	Reset input
82	NMI	The at the rate of tang input (unused)
83	STBY	The hardware standby input (unused)
84	VCC	3.3V power supply
85	XTAL	A clock oscillation child connection terminal
86	EXTAL	A clock oscillation child connection terminal
87	VSS	GND
88	PF7	NC terminal
89	VCC	3.3V power supply
90	PF6	NC terminal
91	RDB	A read control terminal from an outside slave device
92	HWRB	A wright control terminal to an outside slave device
93	PF3	NC terminal
94	PF2	NC terminal
95	PF1	NC terminal
96	PF0	NC terminal
97	P50	NC terminal
98	P51	NC terminal
99	VSS	GND
100	VSS	GND

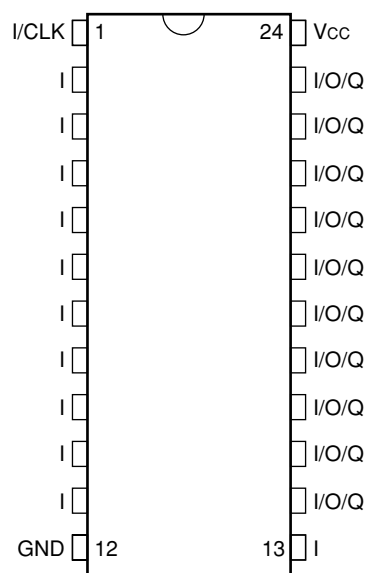
● Pin Function (3/3)

No.	Pin Name	Function
101	P52	NC terminal
102	P53	NC terminal
103	AVCC	3.3V power supply
104	VREF	A/D, D/A reference voltage input (unused)
105	STOPB	The drive control input from IC1703 (PE5064)
106	P41	NC terminal
107	RYBY	The flash memory note ready input
108	ADR_K_EMG_L1	The emergency input from panel bottom address resonance block
109	ADR_K_EMG_U1	The emergency input from panel upper address resonance block
110	ADR_K_EMG_L2	The emergency input from panel bottom address resonance block (unused)
111	ADR_K_EMG_U2	The emergency input from panel upper address resonance block (unused)
112	P47	NC terminal
113	AVSS	GND
114	VSS	GND
115	MUTE_ADR	The panel mute signal input
116	MUTE_SUS	The X and Y drive mute signal output (unused)
117	P15	NC terminal
118	HD	The HD signal input from outside Assy (RGB Assy etc.)
119	P13	NC terminal
120	P12	NC terminal
121	PC_VIDEO	The PC/Video identification output
122	VD	The HD signal input from outside Assy (RGB Assy etc.)
123	MD0	The microcomputer mode of operation select signal input
124	MD1	The microcomputer mode of operation select signal input
125	MD2	The microcomputer mode of operation select signal input
126	PG0	NC terminal
127	CS_31Y	IC1301, IC1401 (PD6358) control signal
128	CS_31X	IC1301, IC1401 (PD6358) control signal

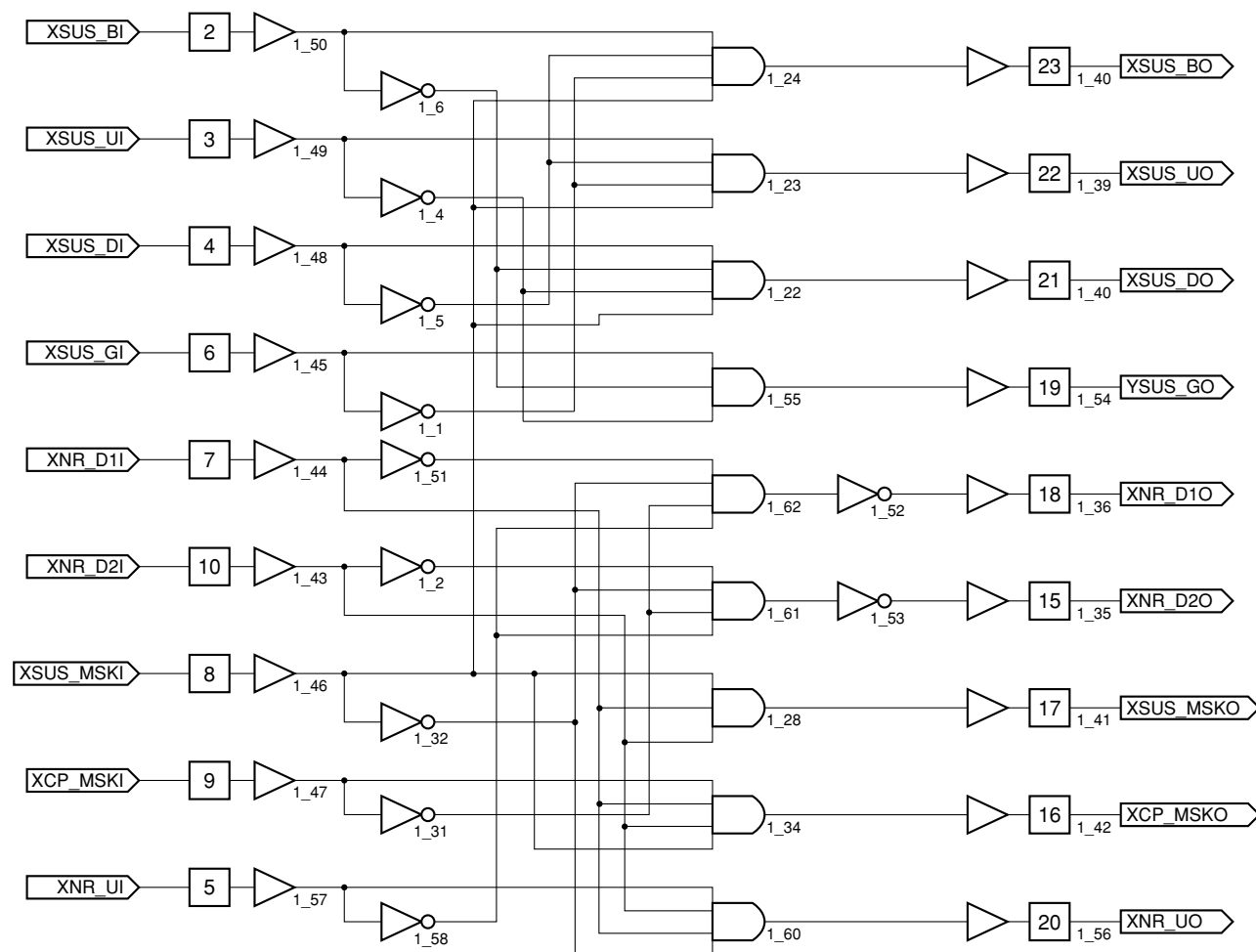
PE1012A (X DRIVEASSY : IC3003)

Drive Protect PLD

● Pin Assignment (Top View)



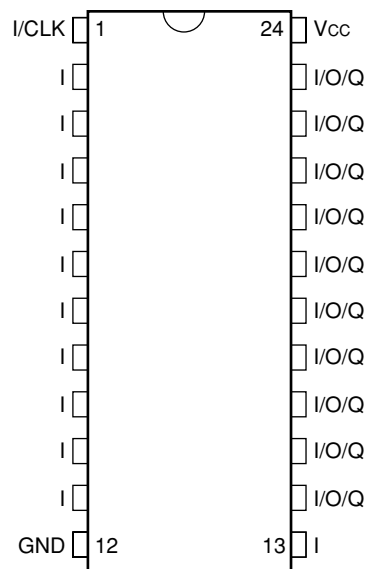
● Block Diagram



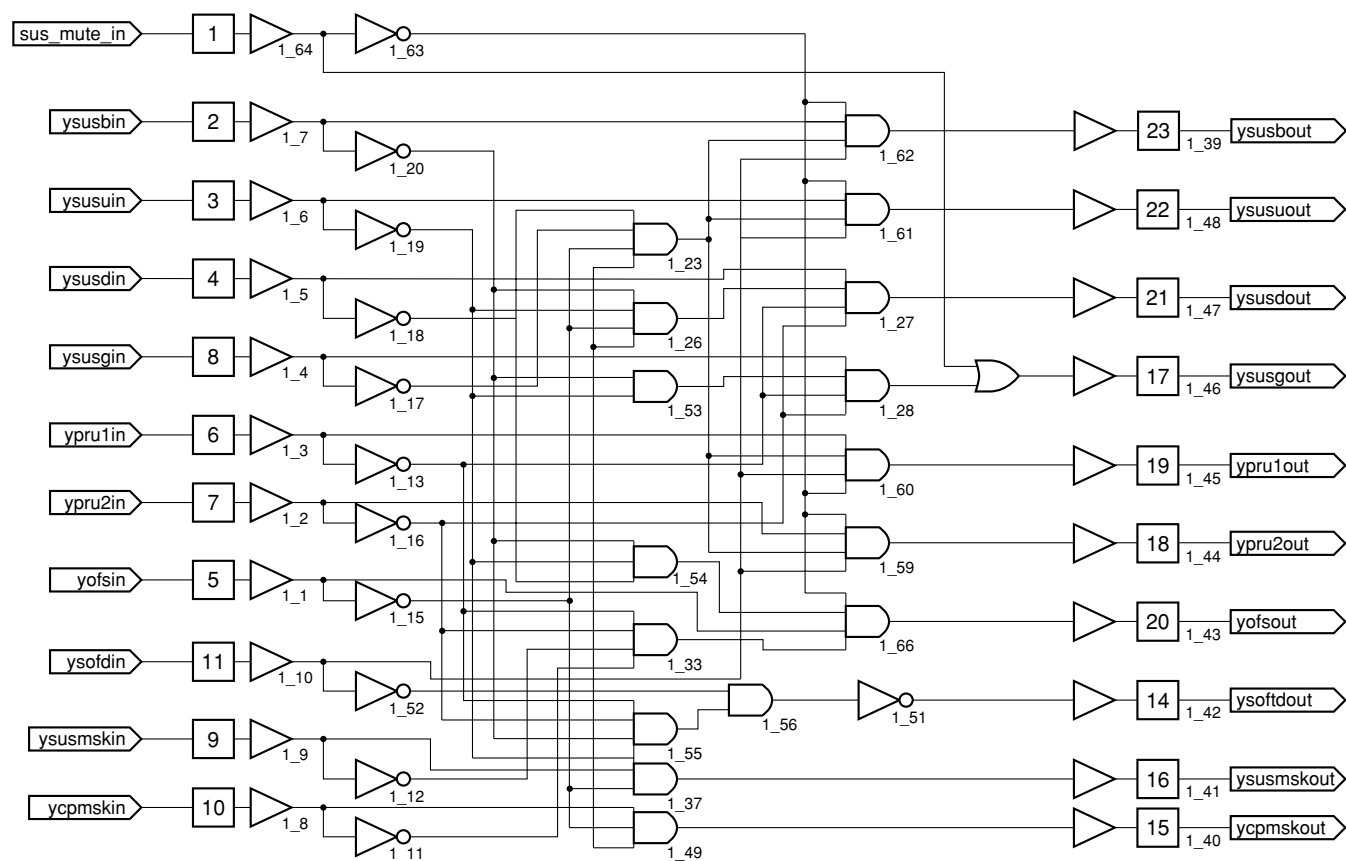
PE1013B (Y DRIVEASSY : IC2006)

Drive Protect PLD

● Pin Assignment (Top View)



● Block Diagram



M30624FGAFP (DIGITAL VIDEO ASSY : IC1207)

Module Microcomputer

● Pin Function (1/2)

No.	Pin Name	Function
1	TXD	Serial 3 line data output for communication with a panel microcomputer
2	CLK	Serial 3 line clock for communication with a panel microcomputer
3	NC	NC terminal
4	NC	NC terminal
5	NC	NC terminal
6	NC	NC terminal
7	NC	NC terminal
8	BYTE	The external data bus width reshuffling input (I am unused and connect GND)
9	CNVSS	A power supply for program note (a note, 5V, usually, pull-down)
10	XCIN	NC terminal
11	XCOU	NC terminal
12	RESET	A reset input terminal
13	XOUT	Clock output terminal
14	VSS	GND
15	XIN	Clock input terminal
16	VCC	5V standby power
17	NMI	Because a NMI interruption terminal is unused, It handle pull up.
18	REM	The SR signal input
19	REQ_PU	A communication demand from a panel microcomputer (the pulse meter acquisition)
20	/SW_TRG	Main switch OFF / ON search
21	NC	NC terminal
22	NC	NC terminal
23	NC	NC terminal
24	AC_OFF	AC power OFF search and power supply ASSY differentiation.
25	PD_TRIGGER	Power down search
26	NC	NC terminal
27	NC	NC terminal
28	NC	NC terminal
29	SCL	EEPROM, IIC communication with power supply ASSY
30	SDA	EEPROM, IIC communication with power supply ASSY
31	TXD1	Communication with the outside (a program note)
32	RXD1	Communication with the outside (a program note)
33	CLK1	Communication with the outside (a program note)
34	BUSY1	Communication with the outside (a program note)
35	TXD0	Communication with outside ASSY (microcomputers main in RGB ASSY, etc)
36	RXD0	Communication with outside ASSY (microcomputers main in RGB ASSY, etc)
37	NC	NC terminal
38	REQ_MD/A_MUTE	232C communication demand (a request to a main microcomputer) / audio system mute
39	NC	NC terminal
40	NC	NC terminal
41	EPM	The EPM input for program note (L fixation)
42	NC	NC terminal
43	PU_CE	Enables/ for panel microcomputer
44	NC	NC terminal
45	MOD_SW/A_NG	The model of machines distinction input / audio system NG input
46	CE	The CE input for program note (H fixation)
47	DITHER/SW_STC	Power supply search of a dither setting / media receiver for module
48	NC	NC terminal
49	/SW_STP	Power supply search of a panel
50	NC	NC terminal

● Pin Function (2/2)

No.	Pin Name	Function
51	NC	NC terminal
52	RELAY	The output for power supply ON / OFF change
53	POWER/MSTATE	Input / SI861 master information for power supply ON / OFF change
54	NC	NC terminal
55	WE_PN	Buffer state control for panel microcomputer note
56	MD0	The panel microcomputer mode of operation change output
57	MD2	The panel microcomputer mode of operation change output
58	FWE	The panel microcomputer program note control signal output
59	RST_PU	The panel microcomputer reset output
60	PN_MUTE	The panel mute input
61	NC	NC terminal
62	VCC	5V standby power
63	NC	NC terminal
64	VSS	GND
65	NC	NC terminal
66	NC	NC terminal
67	/A_SCL	IIC clock for audio system
68	/A_SDA	IIC data for audio system
69	APD_MUTE	A mute signal of address series
70	ADR_K_PD	The address oscillatory system PD input
71	ADR_PD	The address series PD input
72	DCC_PD	The power supply system PD input
73	NC	NC terminal
74	NC	NC terminal
75	RST2	Panel microcomputer reset search
76	NC	NC terminal
77	/DDC_SCL	IIC communication with a media receiver
78	/DDC_SDA	IIC communication with a media receiver
79	NC	NC terminal
80	NC	NC terminal
81	DEW_DET	The dew condensation sensor input
82	NC	NC terminal
83	NC	NC terminal
84	NC	NC terminal
85	NC	NC terminal
86	LED_G	Green LED lighting (LED on interface ASSY in a panel module)
87	LED_R	Red LED lighting (LED on interface ASSY in a panel module)
88	NC	NC terminal
89	BUSY	Communication permission / inhibiting signal from a panel microcomputer
90	NC	NC terminal
91	NC	NC terminal
92	/F_KEY1	The front KEY input
93	MAX_PLS2/F_KEY2	The terminal / front KEY input for brightness setting mode of operation change
94	TEMP1	The A/D input for temperature sensor
95	MAX_PLS? /CCKM	Terminal / connection search for brightness setting mode of operation change
96	AVSS	GND for AD conversion
97	PM_ST	The A/D input for model of machines distinction
98	VREF	Reference voltage for AD conversion
99	AVCC	5V standby power for AD conversion
100	RXD	Serial 3 line data entry for communication with a panel microcomputer

PD6358A (DIGITAL VIDEO ASSY : IC1301, IC1401)

Picture Improved IC

● Pin Function (1/7)

No.	Pin Name	Function
1	VSS	GND
2	TESTO6	Test output terminal (unused)
3	OSDCLK	The CLK input for OSD
4	TTST	Test input terminal (unused)
5	VDDI	2.5V power supply
6	OVDDE-01	3.3V power supply
7	AGO0	Address data output (G signal)
8	VDDI	2.5V power supply
9	AGO2	Address data output (G signal)
10	AGO3	Address data output (G signal)
11	AGO4	Address data output (G signal)
12	VDDI	2.5V power supply
13	ARO6	Address data output (R signal)
14	AGO7	Address data output (G signal)
15	VDDI	2.5V power supply
16	ARO9	Address data output (R signal)
17	ABO9	Address data output (B signal)
18	VDDI	2.5V power supply
19	ADRCLKO2	The address CLK output (for panel upper part)
20	ARO12	Address data output (R signal)
21	ARO13	Address data output (R signal)
22	AGO14	Address data output (G signal)
23	AGO15	Address data output (G signal)
24	ARO16	Address data output (R signal)
25	ARO17	Address data output (R signal)
26	VSS	GND
27	ABO17	Address data output (B signal)
28	AGO17	Address data output (G signal)
29	AGO18	Address data output (G signal)
30	ABO19	Address data output (B signal)
31	UDAT15	Microcomputer data bus
32	UDAT12	Microcomputer data bus
33	UDAT9	Microcomputer data bus
34	UDAT5	Microcomputer data bus
35	OVDDE-06	3.3V power supply
36	APLP	APL value output trigger signal
37	OVDDE-08	3.3V power supply
38	CS5BI	The chip select input
39	CS4BI	The chip select input
40	UADRI13	Microcomputer address bus
41	UADRI9	Microcomputer address bus
42	UADRI6	Microcomputer address bus
43	UADRI2	Microcomputer address bus
44	UADRI1	Microcomputer address bus
45	TESTI2	Test input terminal (unused)
46	BIT0	The subfield No output (the 0 bit)
47	OVDDE-11	3.3V power supply
48	TESTO4	Test output terminal (unused)
49	ARO39	Address data output (G signal)
50	AGO38	Address data output (G signal)

● Pin Function (2/7)

No.	Pin Name	Function
51	VSS	GND
52	ABO37	Address data output (B signal)
53	ABO36	Address data output (B signal)
54	ARO36	Address data output (R signal)
55	ABO34	Address data output (B signal)
56	ADRCLKO4	The address CLK output (for panel bottom part)
57	AGO33	Address data output (G signal)
58	AGO32	Address data output (G signal)
59	AGO31	Address data output (G signal)
60	AGO30	Address data output (G signal)
61	AGO29	Address data output (G signal)
62	VDDI	2.5V power supply
63	ABO27	Address data output (B signal)
64	AGO26	Address data output (G signal)
65	VDDI	2.5V power supply
66	AGO24	Address data output (G signal)
67	VDDI	2.5V power supply
68	ABO22	Address data output (B signal)
69	VDDI	2.5V power supply
70	ARO21	Address data output (R signal)
71	ARO20	Address data output (R signal)
72	VDDI	2.5V power supply
73	OVDDE-14	3.3V power supply
74	TDI	The JTAG input
75	RBI9	The R picture B aspect signal input (the ninth bit)
76	VSS	GND
77	RBI8	The R picture B aspect signal input (the eighth bit)
78	RBI6	The R picture B aspect signal input (the sixth bit)
79	RBI4	The R picture B aspect signal input (the fourth bit)
80	OVSS-09	GND
81	RSTB	Reset input
82	GBI8	The G picture B aspect signal input (the eighth bit)
83	OVDDE-18	3.3V power supply
84	GBI5	The G picture B aspect signal input (the fifth bit)
85	GBI2	The G picture B aspect signal input (the second bit)
86	DEI	DE signal input
87	BBI6	The B picture B aspect signal input (the sixth bit)
88	BBI3	The B picture B aspect signal input (the third bit)
89	VDI	VD signal input
90	HDI	HD signal input
91	RAI6	The R picture A aspect signal input (the sixth bit)
92	RAI2	The R picture A aspect signal input (the second bit)
93	TESTI0	Test input terminal (unused)
94	OVSS-11	GND
95	GAI7	The G picture A aspect signal input (the seventh bit)
96	GAI3	The G picture A aspect signal input (the third bit)
97	GAI0	The G picture A aspect signal input (the 0 bit)
98	BAI6	The B picture A aspect signal input (the sixth bit)
99	BAI3	The B picture A aspect signal input (the third bit)
100	BAI0	The B picture A aspect signal input (the 0 bit)

● Pin Function (3/7)

No.	Pin Name	Function
A 101	TESTO7	Test output terminal (unused)
102	TESTO5	Test output terminal (unused)
103	OSDH	OSDH input
104	BLK	OSDBLK input
105	OSDB	OSDB signal input
106	NC	NC terminal
107	ARO1	Address data output (R signal)
108	ARO2	Address data output (R signal)
109	ARO3	Address data output (R signal)
110	ARO4	Address data output (R signal)
B 111	ARO5	Address data output (R signal)
112	ABO5	Address data output (B signal)
113	ARO7	Address data output (R signal)
114	ARO8	Address data output (R signal)
115	ABO8	Address data output (B signal)
116	AGO9	Address data output (G signal)
117	AGO10	Address data output (G signal)
118	ADRCKO1	Address CLK output (for panel upper part)
119	ABO11	Address data output (B signal)
120	ABO12	Address data output (B signal)
121	ARO14	Address data output (R signal)
C 122	ARO15	Address data output (R signal)
123	ABO15	Address data output (B signal)
124	ABO16	Address data output (B signal)
125	AGO16	Address data output (G signal)
126	ARO18	Address data output (R signal)
127	AGO19	Address data output (G signal)
128	OVDDE-05	3.3V power supply
129	UDAT13	Microcomputer data bus
130	UDAT10	Microcomputer data bus
131	UDAT6	Microcomputer data bus
D 132	UDAT3	Microcomputer data bus
133	UDAT0	Microcomputer data bus
134	OVDDE-07	3.3V power supply
135	LR	The panel LR select input
136	RDBI	Microcomputer read control terminal
137	CLKSEL	CLK select input
138	UADRI10	Microcomputer address bus
139	UADRI7	Microcomputer address bus
140	UADRI3	Microcomputer address bus
141	CYCLEB	Address data output control signal
E 142	BIT2	Subfield No. output (the second bit)
143	SFSTB	Address data output control signal
144	OVSS-05	GND
145	TESTO2	Test output terminal (unused)
146	ABO38	Address data output (B signal)
147	ARO38	Address data output (R signal)
148	ARO37	Address data output (R signal)
149	AGO36	Address data output (G signal)
150	ARO35	Address data output (R signal)

● Pin Function (4/7)

No.	Pin Name	Function
151	ADRCCLKO3	The address CLK output (for panel bottom part)
152	ABO33	Address data output (B signal)
153	ABO32	Address data output (B signal)
154	VDDI	2.5V power supply
155	ABO30	Address data output (B signal)
156	VDDI	2.5V power supply
157	ABO28	Address data output (B signal)
158	ARO28	Address data output (R signal)
159	ABO26	Address data output (B signal)
160	ABO25	Address data output (B signal)
161	ABO24	Address data output (B signal)
162	ARO24	Address data output (R signal)
163	ARO23	Address data output (R signal)
164	ARO22	Address data output (R signal)
165	AGO21	Address data output (G signal)
166	AGO20	Address data output (G signal)
167	TDO	JTAG signal
168	TMS	JTAG signal
169	RBI7	The R picture B aspect signal input (the seventh bit)
170	TCK	JTAG signal
171	RBI5	The R picture B aspect signal input (the fifth bit)
172	RBI3	The R picture B aspect signal input (the third bit)
173	RBI1	The R picture B aspect signal input (the first bit)
174	OVDDE-16	3.3V power supply
175	GBI7	The G picture B aspect signal input (the seventh bit)
176	OVSS-10	GND
177	GBI4	The G picture B aspect signal input (the fourth bit)
178	GBI1	The G picture B aspect signal input (the first bit)
179	BBI9	The B picture B aspect signal input (the ninth bit)
180	BBI5	The B picture B aspect signal input (the fifth bit)
181	BBI2	The B picture B aspect signal input (the second bit)
182	RAI9	The R picture A aspect signal input (the ninth bit)
183	CLK3	CLK input terminal (unused)
184	RAI5	The R picture A aspect signal input (the fifth bit)
185	RAI1	The R picture A aspect signal input (the first bit)
186	TESTI1	Test input terminal (unused)
187	GAI9	The G picture A aspect signal input (the ninth bit)
188	GAI6	The G picture A aspect signal input (the sixth bit)
189	GAI2	The G picture A aspect signal input (the second bit)
190	BAI9	The B picture A aspect signal input (the ninth bit)
191	BAI5	The B picture A aspect signal input (the fifth bit)
192	BAI2	The B picture A aspect signal input (the second bit)
193	BAI1	The B picture A aspect signal input (the first bit)
194	OVSS-01	GND
195	OVSS-02	GND
196	OSDG	OSDG signal input
197	ARO0	Address data output (R signal)
198	ABO0	Address data output (B signal)
199	ABO1	Address data output (B signal)
200	ABO2	Address data output (B signal)

● Pin Function (5/7)

No.	Pin Name	Function
201	ABO3	Address data output (B signal)
202	ABO4	Address data output (B signal)
203	OVDDE-02	3.3V power supply
204	ABO6	Address data output (B signal)
205	ABO7	Address data output (B signal)
206	VDDI	2.5V power supply
207	OVDDE-03	3.3V power supply
208	ARO10	Address data output (R signal)
209	ABO10	Address data output (B signal)
210	AGO11	Address data output (G signal)
211	AGO12	Address data output (G signal)
212	ABO13	Address data output (B signal)
213	ABO14	Address data output (B signal)
214	OVDDE-04	3.3V power supply
215	OVSS-03	GND
216	ARO19	Address data output (R signal)
217	TESTO1	Test output terminal (unused)
218	UDAT14	Microcomputer data bus
219	UDAT11	Microcomputer data bus
220	UDAT7	Microcomputer data bus
221	UDAT4	Microcomputer data bus
222	UDAT1	Microcomputer data bus
223	VDRD	V signal output
224	HWRBI	Microcomputer wright control terminal
225	UADRI14	Microcomputer address bus
226	OVDDE-09	3.3V power supply
227	UADRI11	Microcomputer address bus
228	UADRI8	Microcomputer address bus
229	UADRI4	Microcomputer address bus
230	BIT3	Subfield No. output (the third bit)
231	BIT1	Subfield No. output (the first bit)
232	OVDDE-10	3.3V power supply
233	TESTO3	Test output terminal (unused)
234	ABO39	Address data output (B signal)
235	AGO37	Address data output (G signal)
236	OVSS-06	GND
237	AGO35	Address data output (G signal)
238	ADRCLKO5	Address CLK output (for panel bottom part)
239	ARO34	Address data output (R signal)
240	ARO33	Address data output (R signal)
241	ABO31	Address data output (B signal)
242	ARO31	Address data output (R signal)
243	ABO29	Address data output (B signal)
244	ARO29	Address data output (R signal)
245	OVDDE-12	3.3V power supply
246	ARO27	Address data output (R signal)
247	ARO26	Address data output (R signal)
248	ARO25	Address data output (R signal)
249	OVDDE-13	3.3V power supply
250	AGO23	Address data output (G signal)

● Pin Function (6/7)

No.	Pin Name	Function
251	AGO22	Address data output (G signal)
252	VDDI	2.5V power supply
253	ABO20	Address data output (B signal)
254	OVSS-07	GND
255	OVDDE-15	3.3V power supply
256	OVSS-08	GND
257	RBI2	The R picture B aspect signal input (the second bit)
258	TRST	JTAG signal
259	GBI9	The G picture B aspect signal input (the ninth bit)
260	GBI6	The G picture B aspect signal input (the sixth bit)
261	OVDDE-17	3.3V power supply
262	GBI3	The G picture B aspect signal input (the third bit)
263	GBI0	The G picture B aspect signal input (the 0 bit)
264	BBI8	The B picture B aspect signal input (the eighth bit)
265	BBI4	The B picture B aspect signal input (the fourth bit)
266	BBI1	The B picture B aspect signal input (the first bit)
267	RAI8	The R picture A aspect signal input (the eighth bit)
268	OVDDE-19	3.3V power supply
269	RAI4	The R picture A aspect signal input (the fourth bit)
270	RAI0	The R picture A aspect signal input (the 0 bit)
271	FREERUN	The freerun control input
272	GAI8	The G picture A aspect signal input (the eighth bit)
273	GAI5	The G picture A aspect signal input (the fifth bit)
274	GAI1	The G picture A aspect signal input (the first bit)
275	BAI8	The B picture A aspect signal input (the eighth bit)
276	BAI4	The B picture A aspect signal input (the fourth bit)
277	VDDE	3.3V power supply
278	OSDV	OSDV input
279	VSS	GND
280	OSDR	OSDR signal input
281	VDDE	3.3V power supply
282	AGO1	Address data output (G signal)
283	VSS	GND
284	VDDI	2.5V power supply
285	VDDI	2.5V power supply
286	AGO5	Address data output (G signal)
287	AGO6	Address data output (G signal)
288	VDDI	2.5V power supply
289	AGO8	Address data output (G signal)
290	VSS	GND
291	ADRCLKO0	The address CLK output (for panel upper part)
292	VDDE	3.3V power supply
293	ARO11	Address data output (R signal)
294	VSS	GND
295	AGO13	Address data output (G signal)
296	VDDE	3.3V power supply
297	ABO18	Address data output (B signal)
298	VSS	GND
299	TESTO0	Test output terminal (unused)
300	VDDI	2.5V power supply

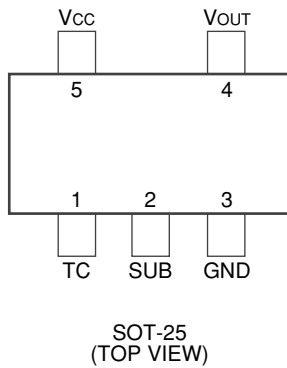
● Pin Function (7/7)

No.	Pin Name	Function
301	UDAT8	Microcomputer data bus
302	VSS	GND
303	UDAT2	Microcomputer data bus
304	VDDI	2.5V power supply
305	OVSS-04	GND
306	UADRI15	Microcomputer address bus
307	VDDI	2.5V power supply
308	UADRI12	Microcomputer address bus
309	VSS	GND
310	UADRI5	Microcomputer address bus
311	VDDI	2.5V power supply
312	NC	NC terminal
313	VSS	GND
314	AGO39	Address data output (G signal)
315	VDDE	3.3V power supply
316	ABO35	Address data output (B signal)
317	VSS	GND
318	AGO34	Address data output (G signal)
319	VDDE	3.3V power supply
320	ARO32	Address data output (R signal)
321	VSS	GND
322	ARO30	Address data output (R signal)
323	VDDI	2.5V power supply
324	AGO28	Address data output (G signal)
325	AGO27	Address data output (G signal)
326	NC	NC terminal
327	AGO25	Address data output (G signal)
328	VSS	GND
329	ABO23	Address data output (B signal)
330	VDDE	3.3V power supply
331	ABO21	Address data output (B signal)
332	VSS	GND
333	VPD	GND
334	VDDE	3.3V power supply
335	RBI0	The R picture B aspect signal input (the 0 bit)
336	VSS	GND
337	ACLK	CLK input (25MHz)
338	VDDI	2.5V power supply
339	CLK4	CLK input (50MHz)
340	VSS	GND
341	BBI7	The B picture B aspect signal input (the seventh bit)
342	VDDI	2.5V power supply
343	BBI0	The B picture B aspect signal input (the 0 bit)
344	RAI7	The R picture A aspect signal input (the seventh bit)
345	VDDI	2.5V power supply
346	RAI3	The R picture A aspect signal input (the third bit)
347	VSS	GND
348	CLK2	The image system CLK input
349	VDDI	2.5V power supply
350	GAI4	The G picture A aspect signal input (the fourth bit)
351	VSS	GND
352	BAI7	The B picture A aspect signal input (the seventh bit)

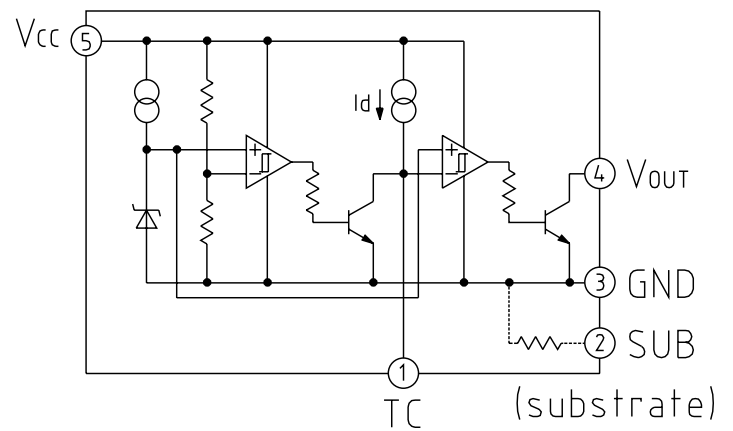
■ **PST9246N (DIGITAL VIDEO ASSY: IC1208)**

Reset IC

● Pin Assignment (Top View)



● Block Diagram



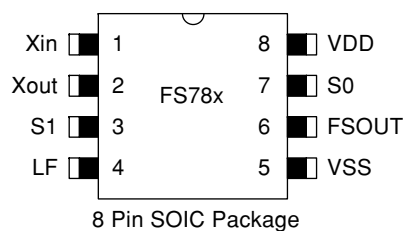
● Pin Function

Pin No.	Pin name	Functions
1	TC	TPLH control pin
2	SUB	Substate pin
3	GND	GND pin
4	VOUT	Reset signal output pin
5	Vcc	Vcc pin / voltage detect pin

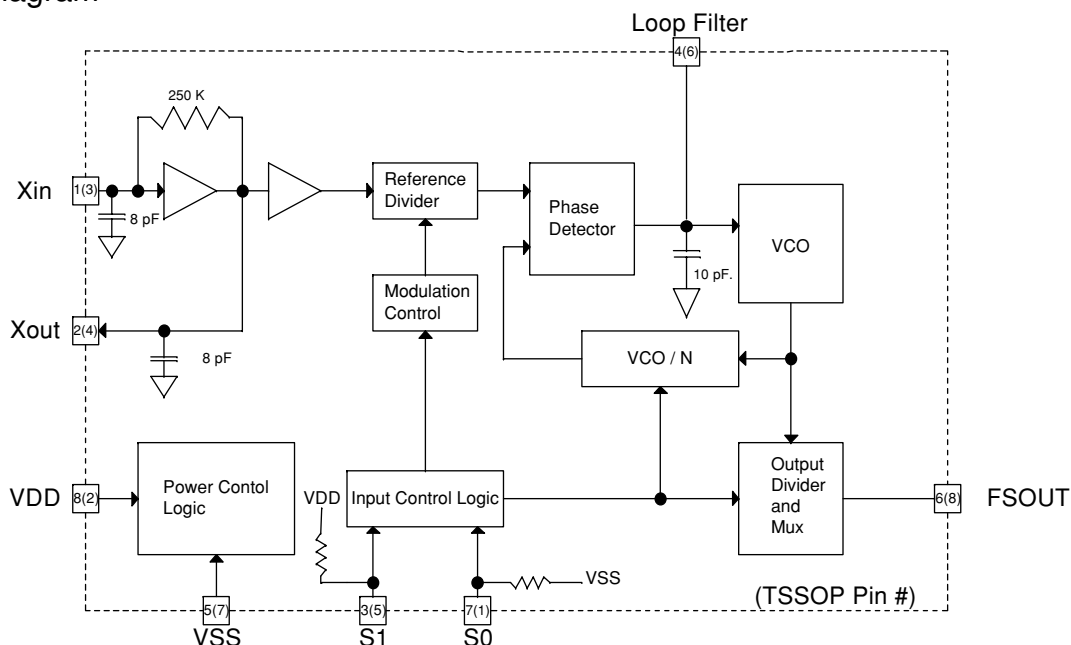
FS781BZB (DIGITAL VIDEO ASSY: IC1802)

Low EMI Clock IC

Pin Assignment (Top View)



Block Diagram



Pin Function

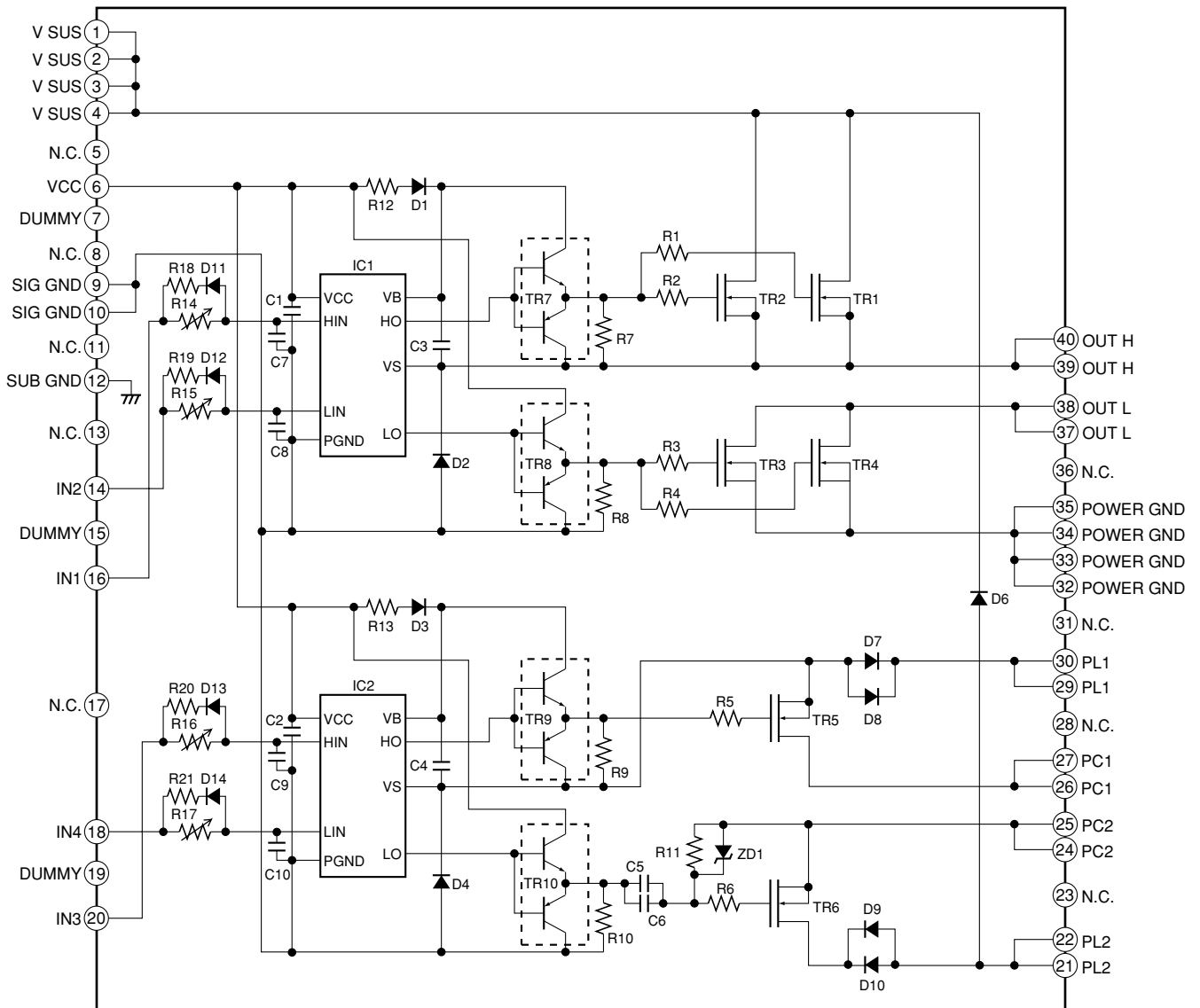
No.	Pin Name	I/O	Type	Function
1/2	Xin/Xout	I/O	Analog	Pins form an on-chip reference oscillator when connected to terminals of an external parallel resonant crystal. Xin may be connected to TTL/CMOS external clock source. If Xin connected to external clock other than crystal, leave Xout (pin2) unconnected.
7/3	S0/S1	I	CMOS/TTL	Digital control inputs to select input frequency range and output frequency scaling. Refer to Tables 7 and 8 for selection. S0 has internal pulldown. S1 has internal pullup.
4	LF	I	Analog	Loop Filter. Single ended tri-state output of the phase detector. A two-pole passive loop filter is connected to Loop Filter (LF).
6	FSOUT	O	CMOS/TTL	Modulated Clock Frequency Output. The center frequency is the same as the input reference frequency for FS781. Input frequency is multiplied by 2X and 4X for FS782 and FS784 respectively.
8	VDD	P	Power	Positive Power Supply
5	VSS	P	Power	Power Supply Ground

■ STK795-470 (X DRIVE ASSY : IC3200, IC3201)

(Y DRIVE ASSY : IC2206, IC2214)

PDP Pulse Module IC

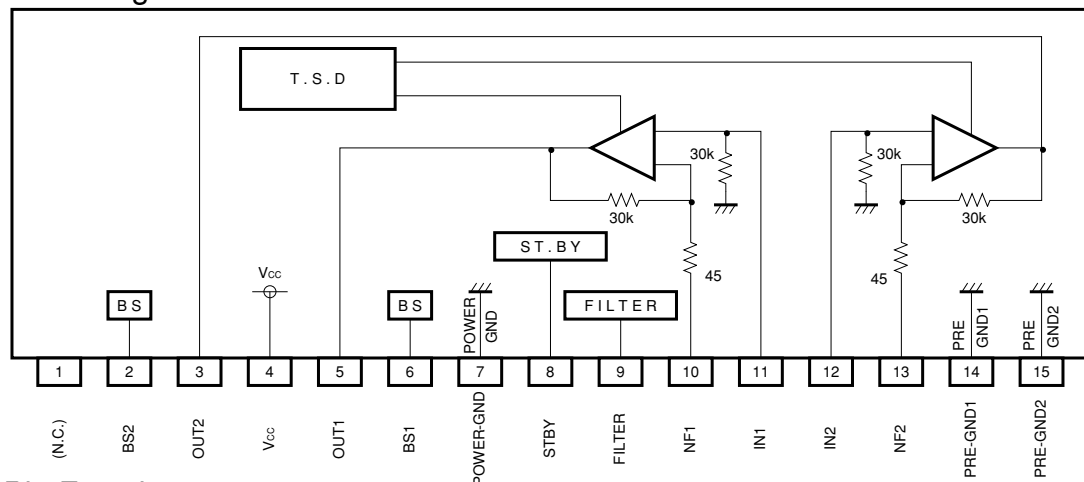
● Block Diagram



BA5417 (MX AUDIO ASSY: IC8601)

Power Amp

● Block diagram



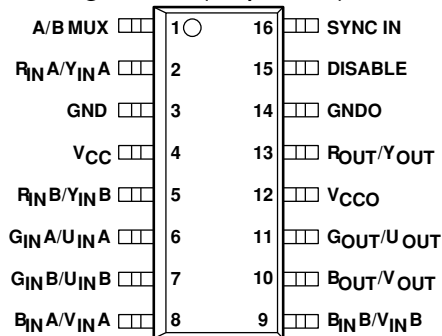
● Pin Function

Terminal No.	Name of terminal	Description
1	(NC)	—
2	BS2	Boot-strap terminal 2
3	OUT2	Output terminal 2
4	VCC	Power source terminal
5	OUT1	Output terminal 1
6	BS1	Boot-strap terminal 1
7	POWER-GND	Power GND
8	STBY	Stand-by control terminal
9	FILTER	Ripple filter terminal
10	NF1	Feedback terminal 1
11	IN1	Input terminal 1
12	IN2	Input terminal 2
13	NF2	Feedback terminal 2
14	PRE-GND1	Small signal GND 1
15	PRE-GND2	Small signal GND 2

■ ML6426CS1 (RGB ASSY: IC4403)

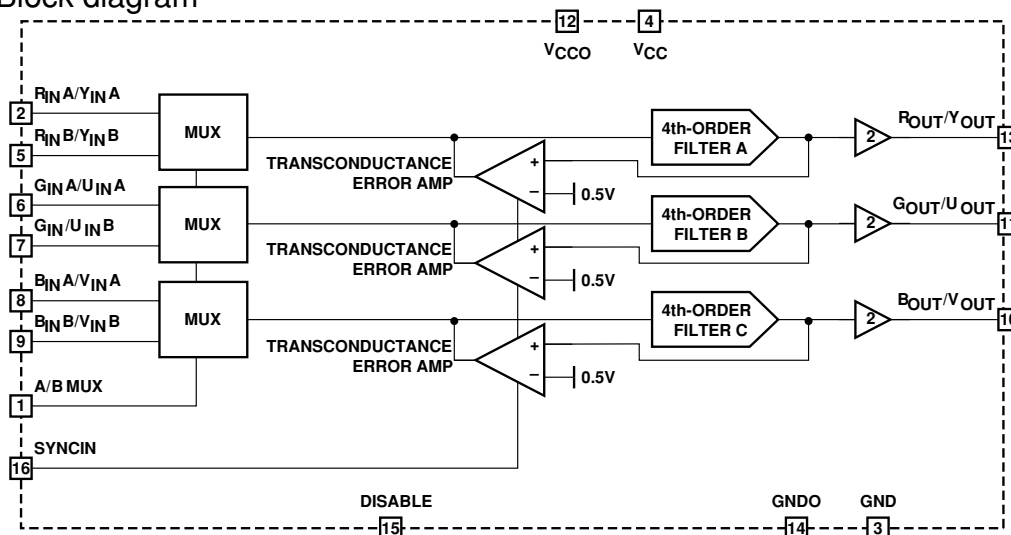
LPF IC

● Pin Assignment (Top view)



TOP VIEW

● Block diagram



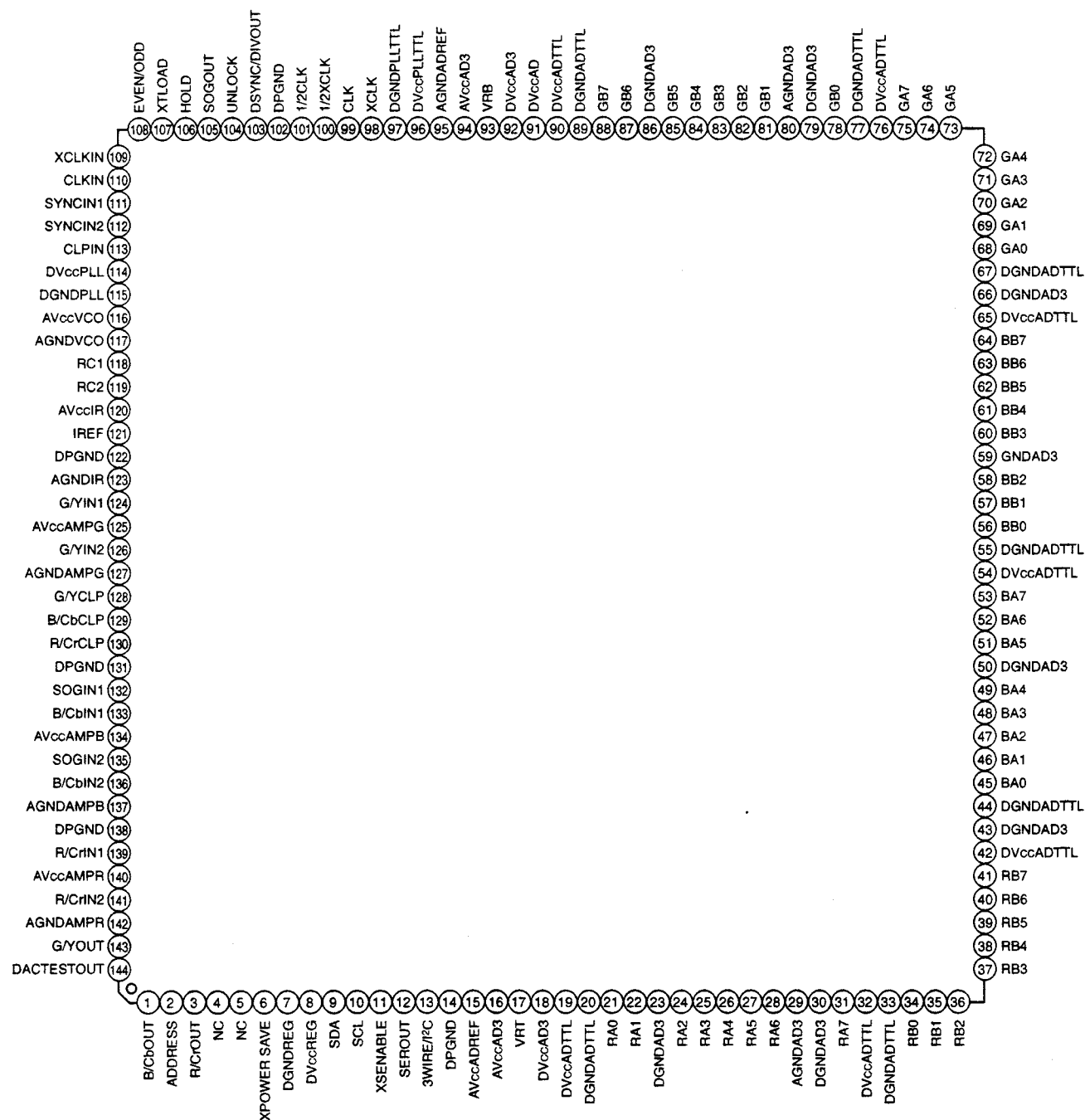
● Pin Function

PIN	NAME	FUNCTION	PIN	NAME	FUNCTION
1	A/B MUX	Logic input pin to select between Bank <A> and Bank video inputs. This pin is internally pulled high.	8	B _{IN} A/V _{IN} A	Unfiltered analog B- orV-channel input for Bank <A>. Sync must be provided at SYNC IN pin.
2	R _{IN} A/Y _{IN} A	Unfiltered analog R- orY-channel input for Bank <A>. Sync must be provided at SYNC IN pin.	9	B _{IN} B/V _{IN} B	Unfiltered analog B- orV-channel input for Bank . Sync must be provided at SYNC IN pin.
3	GND	Analog ground	10	B OUT	Analog B orV-channel output
4	V _{CC}	Analog 5V supply	11	G OUT	Analog G or U-channel output
5	R _{IN} B/Y _{IN} B	Unfiltered analog R- orY-channel input for Bank . Sync must be provided at SYNC IN pin.	12	V _{CCO}	5V power supply for output buffers
6	G _{IN} A/U _{IN} A	Unfiltered analog G- or U-channel input for Bank <A>. Sync must be provided at SYNC IN pin.	13	R OUT	Analog R orY-channel output
7	G _{IN} B/U _{IN} B	Unfiltered analog G- or U-channel input for Bank . Sync must be provided at SYNC IN pin.	14	G_NDO	Analog ground
			15	DISABLE	Disable/Enable pin. Turns the chip off when logic high. Internally pulled low.
			16	SYNCIN	Input for an external H-sync logic signal for filter channels. CMOS level input. Active High.

■ CXA3516R (RGB ASSY: IC4603)

AD + PLL IC

● Pin Assignment (Top view)



● Pin Function (1/3)

Pin No.	Symbol	I/O	Typical signal	Description
1	B/CbOUT	O	1.83V	Amplifier output signal monitor
2	ADDRESS	I	—	I ² C slave address setting
3	R/CrOUT	O	1.83V	Amplifier output signal monitor
4	NC	—	—	Not used
5	NC	—	—	Not used
6	XPOWER SAVE	I	TTL	Power save setting
7	DGNDREG	—	GND	Register GND
8	DVccREG	—	5V	Register power supply
9	SDA	I	—	Control register data input
10	SCL	I	—	Control register CLK input
11	XSENABLE	I	TTL	Enable signal input for 3-wire control register
12	SEROUT	O	TTL	3-wire control register data readout
13	3WIRE/I ² C	I	—	Selection of input between I ² C bus and 3-wire bus
15	AVccADREF	—	5V	Reference power supply for A/D converter
16, 94	AVccAD3	—	3.3V	Analog power supply for A/D converter
17	VRT	O	2.9V	Top reference voltage output for A/D converter
18, 92	DVccAD3	—	3.3V	Digital power supply for A/D converter
19, 32, 42, 54, 65, 76, 90	DVccADTTL	—	5V	TTL output power supply for A/D converter
20, 33, 44, 55, 67, 77, 89	DGNDADTTL	—	GND	TTL output GND for A/D converter
21, 22, 24 to 28, 31	RA0 to RA7	O	TTL	Data output for R-channel port A side
23, 30, 43, 50, 59, 66, 79, 86	DGNDAD3	—	GND	Digital GND for A/D converter
29, 80	AGNDAD3	—	GND	Analog GND for A/D converter
34 to 41	RB0 to RB7	O	TTL	Data output for R-channel port B side
45 to 49, 51 to 53	BA0 to BA7	O	TTL	Data output for B-channel port A side
56 to 58, 60 to 64	BB0 to BB7	O	TTL	Data output for B-channel port B side
68 to 75	GA0 to GA7	O	TTL	Data output for G-channel port A side
78, 81 to 85, 87, 88	GB0 to GB7	O	TTL	Data output for G-channel port B side
91	DVccAD	—	5V	Digital power supply for A/D converter
93	VRB	O	1.9V	Bottom reference voltage output for A/D converter
95	AGNDADREF	—	GND	Reference voltage GND for A/D converter

● Pin Function (2/3)

Pin No.	Symbol	I/O	Typical signal	Description
96	DV _{cc} PLL _{TTL}	—	5V	TTL output power supply for PLL
97	DGNDPLL _{TTL}	—	GND	TTL output GND for PLL
98	XCLK	O	TTL	Inverted CLK output
99	CLK	O	TTL	CLK output
100	1/2XCLK	O	TTL	Inverted 1/2CLK output
101	1/2CLK	O	TTL	1/2CLK output
103	DSYNC/ DIVOUT	O	TTL	DSYNC or DIVOUT signal output
104	UNLOCK	O	Open collector	Unlock signal output
105	SOGOUT	O	TTL	Output for SYNC ON GREEN
106	HOLD	I	TTL	Input for phase comparison disable signal
107	XTLOAD	I	TTL	Programmable counter reset setting
108	EVEN/ODD	I	TTL	Inverted pulse input of ADC sampling CLK
109	XCLKIN	I	PECL	Inverted CLK input for testing
110	CLKIN	I	PECL	CLK input for testing
111	SYNCIN1	I	TTL	Sync input 1
112	SYNCIN2	I	TTL	Sync input 2
113	CLPIN	I	TTL	Clamp pulse input
114	DV _{cc} PLL	—	5V	Digital power supply for PLL
115	DGNDPLL	—	GND	Digital GND for PLL
116	AV _{cc} VCO	—	5V	Analog power supply for PLL VCO
117	AGNDVCO	—	GND	Analog GND for PLL VCO
118	RC1	—	2.1V	External pin for PLL loop filter
119	RC2	—	2 to 4.5V	External pin for PLL loop filter
120	AV _{cc} IR	—	5V	Analog power supply for IREF
121	IREF	I	1.2V	Current setup
123	AGNDIR	—	GND	Analog GND for IREF
124	G/YIN1	I	—	G/Y signal input 1
125	AV _{cc} AMPG	—	5V	Power supply for G/Y amplifier block
126	G/YIN2	I	—	G/Y signal input 2
127	AGNDAMPG	—	GND	GND for G/Y amplifier block
128	G/YCLP	—	—	Clamp capacitor for brightness
129	B/CbCLP	—	—	Clamp capacitor for brightness
130	R/CrCLP	—	—	Clamp capacitor for brightness
132	SOGIN1	I	2.8V	SYNC ON GREEN signal input 1
133	B/CbIN1	I	—	B/Cb signal input 1

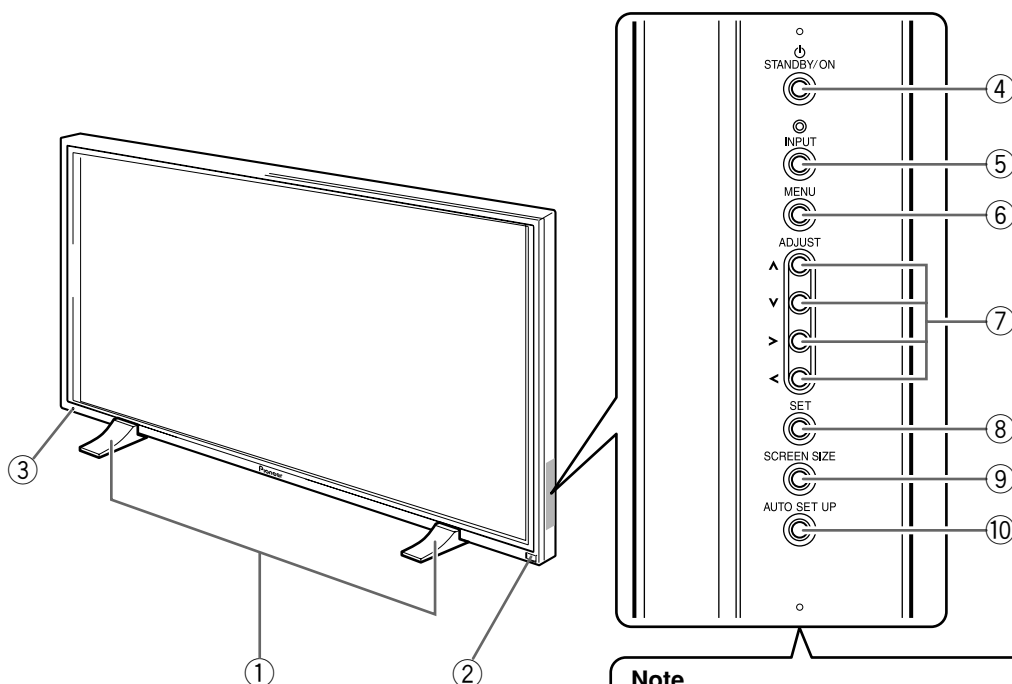
● Pin Function (3/3)

Pin No.	Symbol	I/O	Typical signal	Description
134	AVccAMPB	—	5V	Power supply for B/Cb amplifier block
135	SOGIN2	I	2.8V	SYNC ON GREEN signal input 2
136	B/CbIN2	I	—	B/Cb signal input 2
137	AGNDAMPB	—	GND	GND for B/Cb amplifier block
139	R/CrIN1	I	—	R/Cr signal input 1
140	AVccAMPR	—	5V	Power supply for R/Cr amplifier block
141	R/CrIN2	I	—	R/Cr signal input 2
142	AGNDAMPR	—	GND	GND for R/Cr amplifier block
143	G/YOUT	O	1.83V	Monitor pin for amplifier output signal
144	DAC TEST OUT	O	5V	DAC testing output for amplifier block control register
14, 102, 122, 131, 138	DPGND	—	GND	GND

8. PANEL FACILITIES

PLASMA DISPLAY [PDP-503CMX, PDP-503MXE]

■ MAIN UNIT



Note

When optional speakers have been connected, the operation panel on the main unit will not be operable.

Main unit

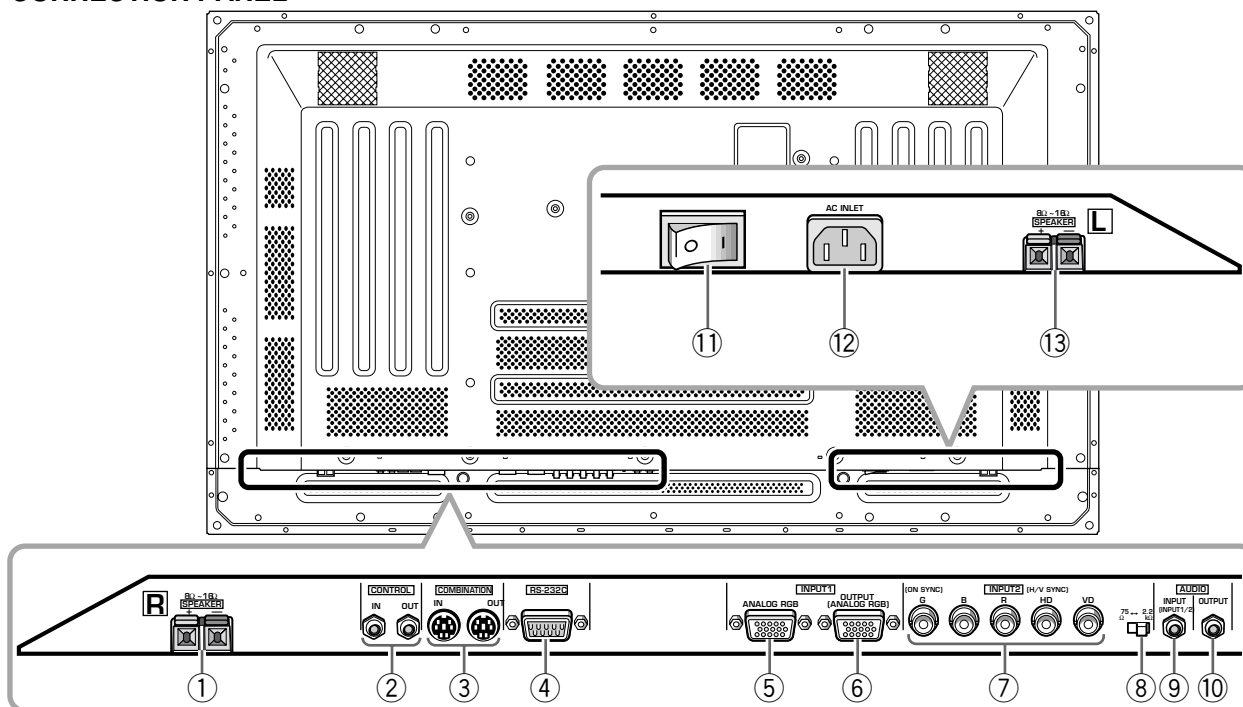
- ① **Display stand**
- ② **Remote control sensor**
Point the remote control toward the remote sensor to operate the unit.
- ③ **STANDBY/ON indicator**
This indicator is red during standby mode, and turns to green when the unit is in the operation mode. Flashes green when Power-Management function is operating. The flashing pattern is also used to indicate error messages.


Operation panel on the main unit

- ④ **STANDBY/ON button**
Press to put the display in operation or standby mode.
- ⑤ **INPUT button**
Press to select input.
- ⑥ **MENU button**
Press to open and close the on-screen menu.
- ⑦ **ADJUST (▲/▼/▶/◀) buttons**
Use to navigate menu screens and to adjust various settings on the unit. Usage of cursor buttons within operations is clearly indicated in the on-screen display.
- ⑧ **SET button**
Press to adjust or enter various settings on the unit.
- ⑨ **SCREEN SIZE button**
Press to select the screen size.
- ⑩ **AUTO SET UP button**
When using computer signal input, automatically sets the POSITION and CLOCK/PHASE to optimum values.

PLASMA DISPLAY [PDP-503CMX, PDP-503MXE]

■ CONNECTION PANEL




The plasma display is provided with 2 video input connectors, 1 video output connector, audio input/output jacks and speaker terminals. There are also CONTROL IN/OUT jacks for connection of PIONEER components with the  mark. When this video card is installed on a plasma display, an additional three sets of video input connectors are provided (total five), together with one additional video output connector (total two).

① SPEAKER (R) terminal

For connection of an external right speaker.
Connect a speaker whose impedance is 8 -16 Ω .

② CONTROL IN/OUT (monaural mini jacks)

For connection of PIONEER components that bear the  mark. Making CONTROL connection enables control of the plasma display as a component in a system.

③ COMBINATION IN/OUT

DO NOT MAKE ANY CONNECTIONS TO THESE TERMINALS.

These terminals are used in the factory setup.

④ RS-232C

DO NOT MAKE ANY CONNECTIONS TO THIS TERMINAL.

This terminal is used in the factory setup.

⑤ INPUT1 (mini D-sub 15 pin)

For connection of components that have RGB or component output jacks such as a personal computer, DVD player, or external RGB decoder. Make sure that the connection made corresponds to the format of the signal output from the connected component.

⑥ OUTPUT (INPUT1) (mini D-sub 15 pin)

Use the OUTPUT (INPUT1) connector to output the video signal to an external monitor or other component. Note: The video signal will not be output from the OUTPUT (INPUT1) connector when the main power of this display is off or in standby mode.

⑦ INPUT2 (BNC jacks)

For connection of components that have RGB or component output jacks such as a personal computer, DVD player, or external RGB decoder. Make sure that the connection made corresponds to the format of the signal output from the connected component.

⑧ Synchronizing signal impedance selector switch

Depending on the connections made at INPUT2, it may be necessary to set this switch to match the output impedance of the connected component's synchronization signal.

When the output impedance of the component's synchronization signal is above 75 Ω , set this switch to the 2.2 k Ω position.

⑨ AUDIO INPUT (Stereo mini jack)

Use to obtain sound when INPUT1, INPUT2 or INPUT5 is selected.

Connect this jack to the audio output connector of the device connected to the plasma display's INPUT1 or INPUT2, or to the audio output connector of the device connected to the video card's INPUT5.

⑩ AUDIO OUTPUT (Stereo mini jack)

Use to output the audio of the selected source component connected to the plasma display to an AV amplifier or similar component.

⑪ MAIN POWER switch

Use to switch the main power of the plasma display on and off.

⑫ AC INLET

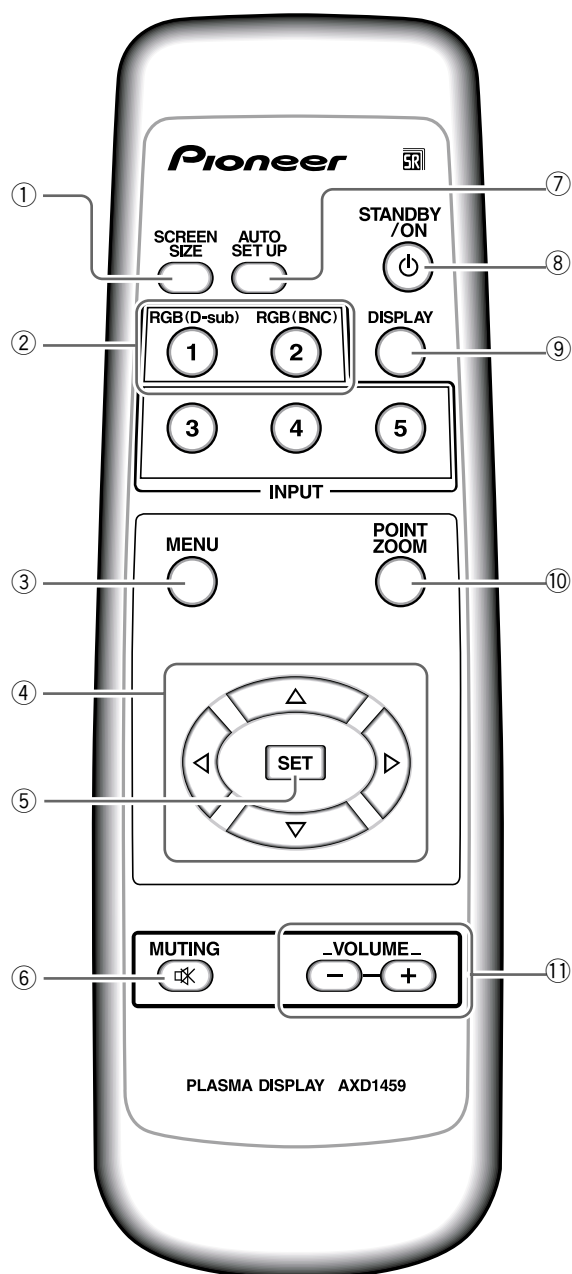
A power cable is furnished with the plasma display; connect one end of the power cable to this connector, and the other end to a standard AC power source.

⑬ SPEAKER (L) terminal

For connection of an external left speaker. Connect a speaker that has an impedance of 8 -16 Ω .

PLASMA DISPLAY [PDP-503CMX, PDP-503MXE]

■ REMOTE CONTROL UNIT



① SCREEN SIZE button

Press to select the screen size.

② INPUT buttons

Use to select the input.

③ MENU button

Press to open and close the on-screen menu.

④ ADJUST (▲/▼/▶/◀) buttons

Use to navigate menu screens and to adjust various settings on the unit.

Usage of cursor buttons within operations is clearly indicated at the bottom the on-screen menu display.

⑤ SET button

Press to adjust or enter various settings on the unit.

⑥ MUTING button

Press to mute the volume.

⑦ AUTO SET UP button

When using computer signal input, automatically sets the POSITION and CLOCK/ PHASE to optimum values.

⑧ STANDBY/ON button

Press to put the unit in operation or standby mode.

⑨ DISPLAY button

Press to view the unit's current input and setup mode.

⑩ POINT ZOOM button

Use to select and enlarge one part of the screen.

⑪ VOLUME (+/-) buttons

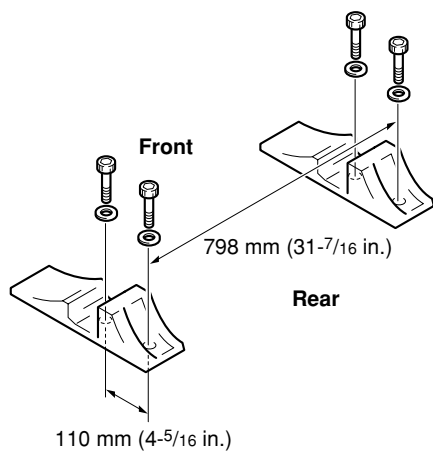
Use to adjust the volume.

■ INSTALLATION OF THE UNIT

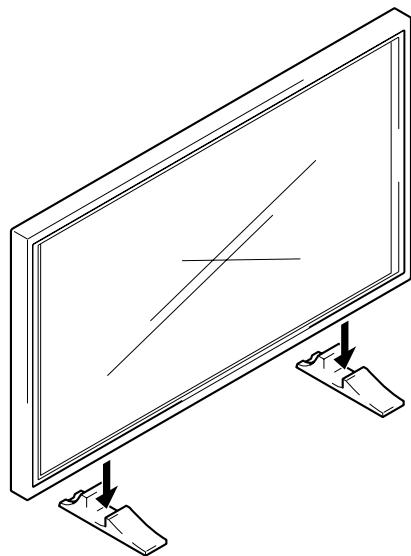
A Installation using the supplied display stand

Be sure to fix the supplied stand to the installation surface. Use commercially available M8 bolts that are 25 mm longer than the thickness of the installation surface.

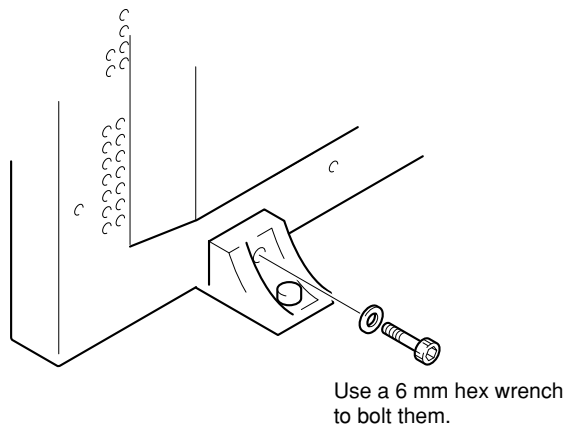
1. Fix the supplied stand to the installation surface at each of the 4 prepared holes using commercially available M8 bolts .



2. Set this unit in the stand.



3. Fix this unit using the supplied washer and bolt.



⚠ CAUTION

Because this unit weighs about 88 lbs 3 oz (about 40 kg) and the lack of depth makes it fairly unstable, please use 2 people or more when packing, carrying

Installation using the optional PIONEER stand or installation bracket

- Please be sure to request installation or mounting of this unit or the installation bracket by an installation specialist or the dealer where purchased.
- When installing, be sure to use the bolts provided with the stand or installation bracket.
- For details concerning installation, please refer to the instruction manual provided with the stand or installation bracket.

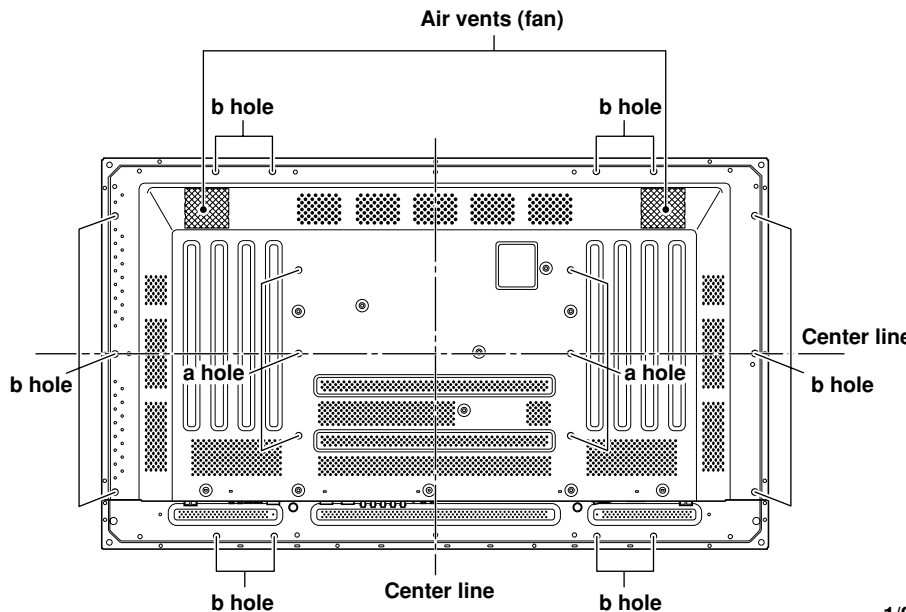
Installation using accessories other than the PIONEER stand or installation bracket (sold separately)

- When possible, please install using parts and accessories manufactured by PIONEER. PIONEER will not be held responsible for accident or damage caused by the use of parts and accessories manufactured by other companies.
- For custom installation, please consult the dealer where the unit was purchased, or a qualified installer.

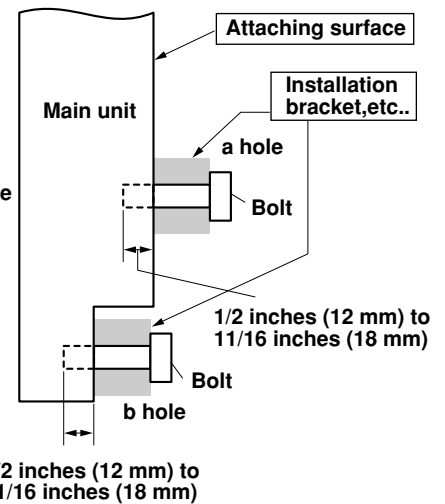
Wall-mount installation of the unit

This unit has been designed with bolt holes for wall-mount installation, etc.. The installation holes that can be used are shown in the diagram below.

- Be sure to attach in 4 or more locations above and below, left and right of the center line.
- Use bolts that are long enough to be inserted 1/2 inch (12 mm) to 11/16 inch (18 mm) into the main unit from the attaching surface for both a holes and b holes. Refer to the side view diagram below.
- As this unit is constructed with glass, be sure to install it on a flat, unwarpd surface.



Rear view diagram



Side view diagram

CAUTION

To avoid malfunction, overheating of this unit, and possible fire hazard, make sure that the vents on the main unit are not blocked when installing. Also, as hot air is expelled from the air vents, be careful of deterioration and dirt build up on rear surface wall, etc..

CAUTION

Please be sure to use an M8 (Pitch = 1.25 mm) bolt. (Only this size bolt can be used.)

CAUTION

Because this unit weighs about 88 lbs 3 oz (about 40 kg) and the lack of depth makes it fairly unstable, please use 2 people or more when packing, carrying or installing.

CAUTION

This unit incorporates a thin design. To ensure safety if vibrated or shaken, please be sure to take measures to prevent the unit from tipping over.